

Requestor's Name: Rebecca Lusk Serial Number: 091021421

Date: 4/21/04 (STIC) Phone: 5 Rem 4070 Art Unit: 1614

Search Topic:

*Mrs. Russell Jordan*

*MEY*

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors, keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

Please search composition comprising  
8. hydroxy gasoline & chelatable  
metal, <sup>further</sup> having limitations of claims 2 - 5.

Search ingredients of claims 15, 17, 18, 20, 21  
35, 36 & their use in compositions

*Thank you  
Rebecca*

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(STIC)

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Date completed: \_\_\_\_\_

Search Site

Vendors

Searcher: \_\_\_\_\_

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Terminal time: \_\_\_\_\_

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747.24 STN

Elapsed time: \_\_\_\_\_

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Dialog

CPU time: \_\_\_\_\_

Type of Search

APS

=> d que 135

L1	1 SEA FILE=REGISTRY ABB=ON PLU=ON	<u>8-HYDROXYQUINOLINE/CN</u>
L18	165673 SEA FILE=REGISTRY ABB=ON PLU=ON	ZN/ELS
L23	1 SEA FILE=REGISTRY ABB=ON PLU=ON	IRON/CN
L26	1 SEA FILE=REGISTRY ABB=ON PLU=ON	COBALT/CN
L27	263268 SEA FILE=REGISTRY ABB=ON PLU=ON	Mn/ELS
L29	1 SEA FILE=REGISTRY ABB=ON PLU=ON	MANGANESE/CN
L31	1 SEA FILE=REGISTRY ABB=ON PLU=ON	COPPER/CN
L32	2026 SEA FILE=HCAPLUS ABB=ON PLU=ON	L1 AND (L23 OR L18 OR L26 OR L27 OR L29 OR L31)
L34	332 SEA FILE=HCAPLUS ABB=ON PLU=ON	L1 (L) CHELATOR
L35	164 SEA FILE=HCAPLUS ABB=ON PLU=ON	L32 AND L34

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← only a few references printed  
from this set

L35 ANSWER 1 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:54807 HCAPLUS

DOCUMENT NUMBER: 140:227882

TITLE: Studies on liquid/liquid extraction of copper ion with room temperature ionic liquid

AUTHOR(S): Wei, Guor-tzo; Chen, Jin-chu; Yang, Zusing

CORPORATE SOURCE: Department of Chemistry and Biochemistry, National Chung Cheng University, Chia-Yi, 621, Taiwan

SOURCE: Journal of the Chinese Chemical Society (Taipei,  
Taiwan) (2003), 50(6), 1123-1130

CODEN: JCCTAC; ISSN: 0009-4536

PUBLISHER: Chinese Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Room temp. ionic liqs. are regarded as Green solvents for their nonvolatile and thermally stable properties. They are employed to replace traditional volatile org. solvents in org. synthesis, solvent extn., and electrochem. A water immiscible room temp. ionic liq., 1-butyl-3-methylimidazolium hexafluorophosphate [C4mim][PF6], was used as an alternative solvent for liq./liq. extn. of copper ions. Metal chelators, including dithizone, 8-hydroxyquinoline, and 1-(2-pyridylazo)-2-naphthol, were employed to form neutral metal-chelate complexes with copper ions so that copper ions were extd. from aq. soln. into [C4mim][PF6]. The parameters that affect the extn. of copper ions with this biphasic system were studied. The extn. behavior in this novel biphasic system is consistent with that of traditional solvents. For example, the extn. with this biphasic system is strongly pH dependent. So, the extn. efficiency of coppers ion from an aq. phase can be manipulated by tailoring the pH value of the extn. system. Hence, the extn., sepn. and preconcn. of copper ions can be accomplished by controlling the pH value of the extn. system. Apparently the use of ionic liq. as an alternate solvent system in liq./liq. extn. of copper ions is very promising.

IT 7440-50-8, Copper, analysis

RL: ANT (Analyte); ANST (Analytical study)

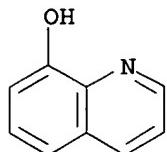
(copper chelate complexes liq./liq. extn. with room temp. ionic liq.)

RN 7440-50-8 HCAPLUS

CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

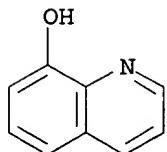
IT 148-24-3, 8-Hydroxyquinoline, uses  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
 (copper chelate complexes liq./liq. extn. with room temp.  
 ionic liq.)  
 RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 2 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:945447 HCAPLUS  
 DOCUMENT NUMBER: 139:401392  
 TITLE: Zinc chelates, their bluegreen-emitting electroluminescent compositions, and organic electroluminescent devices  
 INVENTOR(S): Torii, Masafumi; Sasaki, Masaomi; Kawamura, Shinichi; Okada, Takashi; Kosaka, Toshiya  
 PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003342278	A2	20031203	JP 2002-158351	20020530
PRIORITY APPLN. INFO.:			JP 2002-158351	20020530
AB The chelates have 8-hydroxyquinoline ligands and C.gtoreq.6 fatty acid ligands. The devices having the compns. as emitter layers show high luminescence intensity.				
IT 148-24-3D, 8-Hydroxyquinoline, zinc complex 7440-66-6D, Zinc, complexes with hydroxyquinolines and fatty acids RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses) (bluegreen-emitting zinc chelates with hydroxyquinolines and fatty acids for org. electroluminescent devices)				
RN 148-24-3 HCAPLUS				
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)				



RN 7440-66-6 HCAPLUS  
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L35 ANSWER 3 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:901820 HCAPLUS  
 DOCUMENT NUMBER: 140:145980  
 TITLE: Preparation and evaluation of sulfur-containing metal chelators  
 AUTHOR(S): Clavier, Sylvain; Rist, Oystein; Hansen, Stina;  
 Gerlach, Lars-Ole; Hoegberg, Thomas; Bergman, Jan  
 CORPORATE SOURCE: Center for Nutrition and Toxicology, Karolinska Institute, Hudding, SE-141 57, Swed.  
 SOURCE: Organic & Biomolecular Chemistry (2003), 1(23), 4248-4253  
 CODEN: OBCRAK; ISSN: 1477-0520  
 PUBLISHER: Royal Society of Chemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB With a view to probe the structure and function of G-protein coupled receptors the synthesis of functionalized 8-mercaptopquinoline derivs. and 2-(2-pyridyl)thiophenol was achieved. A fluorescence-based method for detg. the affinity of these metal chelators toward zinc ions was developed.  
 IT 7440-66-6, Zinc, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (Gould-Jacobs cycloaddn. of; prepn. of functionalized mercaptotquinoline derivs. and (pyridyl)thiophenol metal chelators and their zinc ion affinity)  
 RN 7440-66-6 HCAPLUS  
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

IT 148-24-3, 8-Hydroxyquinoline, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (nitration of; prepn. of functionalized mercaptotquinoline derivs. and (pyridyl)thiophenol metal chelators and their zinc ion affinity)  
 RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

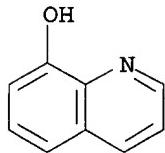
L35 ANSWER 4 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:536189 HCAPLUS  
 DOCUMENT NUMBER: 139:241609  
 TITLE: The protective effect of free radical scavengers and metal chelators on polyethylene glycol-treated rice leaves  
 AUTHOR(S): Hsu, S. Y.; Kao, C. H.  
 CORPORATE SOURCE: Department of Agronomy, National Taiwan University, Taipei, Taiwan, 106, Peop. Rep. China  
 SOURCE: Biologia Plantarum (2003), 46(4), 617-619  
 CODEN: BPABAJ; ISSN: 0006-3134  
 PUBLISHER: Institute of Experimental Botany, Academy of Sciences of the Czech Republic  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Effect of free radical scavengers and metal chelators on polyethylene glycol (PEG, osmotic potential -1.5 MPa) induced oxidative damage in detached rice leaves was investigated. PEG treatment resulted in a decrease in relative water content and an increase in proline content, and lipid peroxidation. PEG treatment also decreased chlorophyll and protein contents. Free radical scavengers (ascorbate, sodium benzoate, reduced glutathione, and thiourea) retarded and metal chelators [2,2'-bipyridine (BP), 8-hydroxyquinoline, and 1,10-phenanthroline] prevented PEG-induced oxidative damage. Furthermore, the protective effect of BP was reversed by adding Fe<sup>2+</sup> and Cu<sup>2+</sup>, but not by Mn<sup>2+</sup> or Zn<sup>2+</sup>. The protective effect of BP is most likely mediated through chelation of iron. It seems that oxidative damage induced by PEG may require the participation of iron.

IT 148-24-3, 8-Hydroxyquinoline, biological studies  
 RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)  
 (protective effect of free radical scavengers and metal chelators on oxidative damaged rice leaves)

RN 148-24-3 HCAPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 7439-89-6, Iron, biological studies 7439-96-5, Manganese, biological studies 7440-50-8, Copper, biological studies 7440-66-6, Zinc, biological studies  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (role in induction of chlorophyll and protein loss in rice leaves caused by oxidative damage; protective effect of free radical scavengers and metal chelators on oxidative damaged rice leaves)

RN 7439-89-6 HCAPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7439-96-5 HCAPLUS  
 CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS  
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

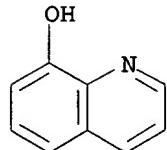
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 5 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:368075 HCAPLUS  
 DOCUMENT NUMBER: 139:206869  
 TITLE: Hydroxyquinolines as iron chelators  
 AUTHOR(S): Pierre, J.-L.; Baret, P.; Serratrice, G.  
 CORPORATE SOURCE: Laboratoire de Chimie Biomimetique, LEDSS, UMR CNRS 5616, Universite J. Fourier, BP 53, Grenoble, 38041/9, Fr.  
 SOURCE: Current Medicinal Chemistry (2003), 10(12), 1077-1084  
 CODEN: CMCHE7; ISSN: 0929-8673  
 PUBLISHER: Bentham Science Publishers Ltd.  
 DOCUMENT TYPE: Journal; General Review  
 LANGUAGE: English  
 AB A review. The interest in synthetic siderophore mimics includes therapeutic applications (iron chelation therapy), the design of more effective agents to deliver Fe to plants and the development of new chem. tools for studies of iron metab. and for a better understanding of iron assimilation processes in living systems. The 8-hydroxyquinoline bidentate chelate moiety offers an alternative to the usual hydroxamic acid, catechol and/or .alpha.-hydroxycarboxylic acid metal-binding groups encountered in natural siderophores. The promising results obtained by the tris hydroxyquinoline-based ligand O-TRENSOX are summarized. O-TRENSOX exhibits a high and selective affinity for Fe(III) complexation. Its efficiency in delivering Fe to plants as well as its efficiency for iron mobilization, cellular protection and antiproliferative effects have been evidenced. Other chelators of the O-TRENSOX family (mixed catechol / 8-hydroxyquinoline ligands, lipophilic ligands) are also described. Some results question whether the use of partition coeffs. is pertinent to foresee the activity of iron chelators. The development of probes (fluorescent, radioactive, spin labeled) based on the O-TRENSOX backbone is in progress. 8-Hydroxyquinoline iron chelators seem to have a promising future.  
 IT 7439-89-6, Iron, biological studies  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (chelators; hydroxyquinolines as iron chelators)

RN 7439-89-6 HCAPLUS  
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

IT 148-24-3D, 8-Quinolinol, derivs.  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (hydroxyquinolines as iron chelators)  
 RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 6 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:327845 HCAPLUS  
 DOCUMENT NUMBER: 139:110673  
 TITLE: Preconcentration and adsorption of metal chelates with analysis by direct sample insertion inductively coupled plasma atomic emission spectrometry  
 AUTHOR(S): Skinner, Cameron D.; Salin, Eric D.  
 CORPORATE SOURCE: Department of Chemistry and Biochemistry, Concordia University, Montreal, QC, H3G 1M8, Can.  
 SOURCE: Journal of Analytical Atomic Spectrometry (2003), 18(5), 495-500  
 CODEN: JASPE2; ISSN: 0267-9477  
 PUBLISHER: Royal Society of Chemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB An automated preconcn. system that uses adsorption of 8-hydroxyquinoline (8-HQ) metal chelates onto a silica-C18 column was evaluated. The metal chelates are desorbed with methanol and sprayed into an inductively heated graphite direct sample insertion cup. In this manner the org. solvent and much of the 8-HQ is removed and does not appear to cause interferences in the plasma. The detection limits of the current system are 8, 30, 60, 10, 9 and 40 parts per trillion for Cd, Cu, Fe, Mn, Pb and Zn, resp., using the reagents as purchased. Instrumental detection limits of 1, 0.2, 90, 0.3, 2 and 10 ppt for the same elements were calcd. assuming that blank contamination can be eliminated.  
 IT 7439-89-6, Iron, analysis 7439-96-5, Manganese, analysis  
 7440-50-8, Copper, analysis 7440-66-6, Zinc, analysis  
 RL: ANT (Analyte); ANST (Analytical study)  
 (metals detn. in soln. by preconcn. and adsorption of metal chelates and direct sample insertion inductively coupled plasma at. emission spectrometry)  
 RN 7439-89-6 HCAPLUS  
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

## Fe

RN 7439-96-5 HCAPLUS  
 CN Manganese (8CI, 9CI) (CA INDEX NAME)

## Mn

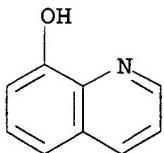
RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

## Cu

RN 7440-66-6 HCAPLUS  
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

## Zn

IT 148-24-3, 8-Hydroxyquinoline, uses  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
 (metals detn. in soln. by preconcn. and adsorption of metal  
 chelates and direct sample insertion inductively coupled plasma  
 at. emission spectrometry)  
 RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 7 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:295276 HCAPLUS  
 DOCUMENT NUMBER: 138:312623  
 TITLE: Post clean treatment of metal or dielectric surfaces  
 in the manufacture of wafers  
 INVENTOR(S): Small, Robert J.  
 PATENT ASSIGNEE(S): EKC Technology, Inc., USA  
 SOURCE: U.S., 20 pp., Cont.-in-part of U.S. 6,156,661.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 14  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6546939	B1	20030415	US 2000-704688	20001103
US 5279771	A	19940118	US 1990-610044	19901105
US 5334332	A	19940802	US 1992-911102	19920709
US 5981454	A	19991109	US 1997-801911	19970214
US 5911835	A	19990615	US 1997-826257	19970327
US 6156661	A	20001205	US 1999-384946	19990827
PRIORITY APPLN. INFO.:				
			US 1990-610044	A2 19901105
			US 1992-911102	A2 19920709
			US 1993-78657	B3 19930621
			US 1995-443265	B1 19950517
			US 1997-801911	A3 19970214
			US 1997-826257	A2 19970327
			US 1999-384946	A2 19990827

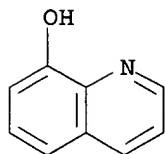
OTHER SOURCE(S) : MARPAT 138:312623

AB A compn. for removal of chem. residues from metal or dielec. surfaces or for chem. mech. polishing of a copper or aluminum surface is an aq. soln. with a pH between about 3.5 and about 7. The compn. contains a monofunctional, difunctional or trifunctional org. acid and a buffering amt. of a quaternary amine, ammonium hydroxide, hydroxylamine, hydroxylamine salt, hydrazine or hydrazine salt base. A method in accordance with the invention for removal of chem. residues from a metal or dielec. surface comprises contacting the metal or dielec. surface with the above compn. for a time sufficient to remove the chem. residues. A method in accordance with the invention for chem. mech. polishing of a copper or aluminum surface comprises applying the above compn. to the copper or aluminum surface, and polishing the surface in the presence of the compn.

IT 148-24-3, 8-Hydroxyquinoline, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (chelating agent; amine compd.-buffered org. acids for post clean treatment of metal or dielec. surfaces in manuf. of wafers)

RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 7440-50-8, Copper, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (wafer blanket; amine compd.-buffered org. acids for post clean treatment of metal or dielec. surfaces in manuf. of wafers)

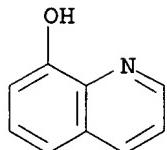
RN 7440-50-8 HCPLUS

CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

REFERENCE COUNT: 73 THERE ARE 73 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 8 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:192846 HCPLUS  
 DOCUMENT NUMBER: 138:398595  
 TITLE: Susceptibility of enterococci to natural and synthetic iron chelators  
 AUTHOR(S): Lisiecki, Paweł; Mikucki, Jerzy  
 CORPORATE SOURCE: Zakl. Mikrobiol. Farm., Katedra Mikrobiol., Akad. Medyczna, Łódź, 90-235, Pol.  
 SOURCE: Medycyna Doswiadczała i Mikrobiologia (2002), 54(4), 317-324  
 CODEN: MDMIAZ; ISSN: 0025-8601  
 PUBLISHER: Państwowy Zakład Higieny  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Polish  
 AB A total of 79 strains of enterococci from 10 species were tested for susceptibility to 14 natural and synthetic iron chelators. All strains showed siderophore activity. The enterococci were susceptible only to 3 synthetic iron chelators: 8-hydroxyquinoline, disodium versenate (EDTA), and o-phenanthroline. They were resistant to all other synthetic chelators: ethylenediamine-di(o-hydroxyphenylacetic acid) (EDDHA), nitrilotriacetate, 2,2'-bipyridyl, salicylic acid and 8-hydroxyquinoline-5-sulfonic acid and to all natural chelators: ovotransferrin, human apotransferrin, horse apoferritin, desferrioxamine B, ferrichrome and rhodotorulic acid. The relations of susceptibility/resistance, iron assimilation, and structure and stability consts. of iron chelators are discussed.  
 IT 148-24-3, 8-Hydroxyquinoline, biological studies 7439-89-6  
 , Iron, biological studies  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (susceptibility of 79 strains from 10 Enterococcus species to 14 natural and synthetic iron chelators)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7439-89-6 HCPLUS  
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

L35 ANSWER 9 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:98995 HCPLUS  
 DOCUMENT NUMBER: 138:255607  
 TITLE: Polymeric chelates of epoxy based polyesters containing oxine as pendent groups  
 AUTHOR(S): Shah, T. B.; Raj, L. M.; Dixit, R. B.  
 CORPORATE SOURCE: Department of Chemistry, Sardar Patel University,

Cook 09/021,421

April 22, 2004

SOURCE: Vallabh Vidyanagar, 388120, India  
International Journal of Polymeric Materials (2003),  
52(1), 9-20  
CODEN: IJPMCS; ISSN: 0091-4037

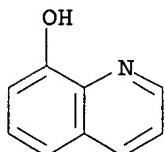
PUBLISHER: Taylor & Francis Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Polymer chelates of epoxy based polyester ligands contg. oxine as pendent group, have been prep'd. with different metal ions like Zn<sup>2+</sup>, Cu<sup>2+</sup>, Ni<sup>2+</sup> and Co<sup>2+</sup>. These novel polymer ligands have been synthesized by condensation of 5-chloromethyl-8-quinolinol hydrochloride resp. with epoxy based prepolyhydroxy ester of succinic acid (EPPE-Su) and of sebamic acid (EPPE-Se) in presence of base catalyst. All these polymer ligands and polymer chelates are characterized by elemental analyses, IR and diffuse reflectance spectral studies for their structure detn. The thermal stability of all polymer chelates have been estd. by thermogravimetric analyses (TGA). Besides this, all the polychelates have also been characterized for their magnetic susceptibility and metal to ligand stoichiometry estn.

IT 148-24-3, 8-Quinolinol, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(in prepn. of polymeric chelates of epoxy based polyesters  
contg. oxine as pendent groups)

RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 23713-49-7DP, Zinc (+2), product with polyesters contg. oxine,  
preparation  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(prep. of polymeric chelates of epoxy based polyesters contg. oxine as  
pendent groups)

RN 23713-49-7 HCPLUS

CN Zinc, ion (Zn<sup>2+</sup>) (8CI, 9CI) (CA INDEX NAME)

Zn<sup>2+</sup>

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 10 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:23106 HCPLUS

DOCUMENT NUMBER: 138:83329

TITLE: Use of metal ion chelates in validating biological  
molecules as drug targets in test animal models

INVENTOR(S): Rist, Oystein; Hogberg, Thomas; Holst Lange, Birgitte;  
Schwartz, Thue W.; Elling, Christian E.

PATENT ASSIGNEE(S): 7TM Pharma A/S, Den.

SOURCE: PCT Int. Appl., 247 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 2

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003003009	A1	20030109	WO 2002-DK456	20020628
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2002054077	A2	20020711	WO 2001-DK867	20011221
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:			DK 2001-1026	A 20010629
			DK 2001-1027	A 20010629
			DK 2001-1028	A 20010629
			DK 2001-1030	A 20010629
			DK 2001-1031	A 20010629
			US 2001-301931P	P 20010629
			WO 2001-DK867	A 20011221
			WO 2000-EP13389	W 20001229
			DK 2001-536	A 20010330
			US 2001-280237P	P 20010330

OTHER SOURCE(S) : MARPAT 138:83329

AB The invention discloses the use of chem. compds. or selections of chem. compds. (libraries) of the general Formula R1XFY(R1)GZR1 [F, G = N, O, S, Se, P; X, Y, Z = (un)branched C1-12 alkyl, aryl, heteroaryl, etc.; R1 = ABC; A = coupling or connecting moiety; B = spacer moiety; C = functional group] for in vivo methods for testing or validating the physiol. importance and/or the therapeutic or pharmacol. potential of biol. target mols., notably proteins such as, e.g., receptors and esp. 7TM receptors in test animals expressing the biol. target mol. with, notably, a silent, engineered metal ion site. Use of specific metal ion binding sites of a generic nature in specific biol. target mols. such as, e.g. transmembrane proteins wherein the metal ion binding site is capable of forming a complex with a metal ion is also described. Also disclosed are chem. compds. or libraries suitable for use in methods for improving the in vivo pharmacokinetic behavior of metal ion chelates (e.g. the absorption pattern, the plasma half-life, the distribution, the metab. and/or the elimination of the metal ion chelates). In order to improve the efficacy of the impact of the metal ion chelate on the biol. target mol. after administration of the metal ion chelate in vivo to a test animal, it is

advantageous e.g. to increase the period during which the metal ion chelate is in the circulatory system and/or localized at the target. Further disclosed are metal ion-chelating compds. designed to be suitable for use in a target validation process according to the invention, as well as libraries of at least two or more of such metal ion-chelating compds.

IT 7646-85-7, Zinc chloride, biological studies 16571-18-9

28293-61-0 139238-43-0

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(metal ion chelates in validating biol. mols. as drug targets in test animal models)

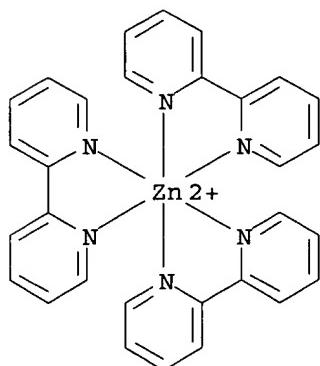
RN 7646-85-7 HCPLUS

CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

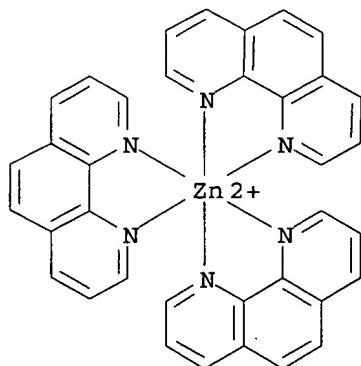
RN 16571-18-9 HCPLUS

CN Zinc(2+), tris(2,2'-bipyridine-.kappa.N1,.kappa.N1')-, (OC-6-11)- (9CI)  
(CA INDEX NAME)



RN 28293-61-0 HCPLUS

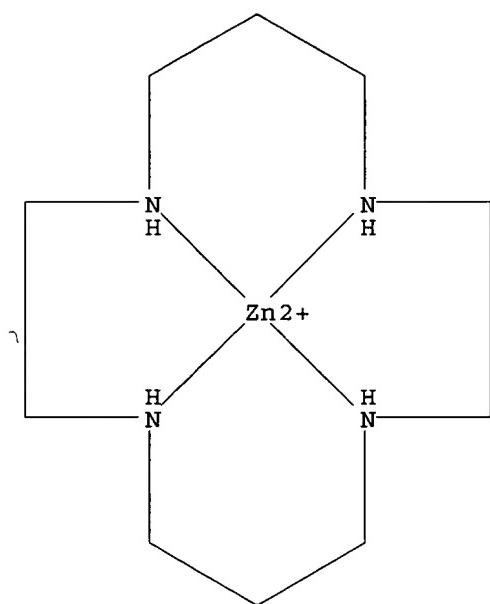
CN Zinc(2+), tris(1,10-phenanthroline-.kappa.N1,.kappa.N10)-, (OC-6-11)-  
(9CI) (CA INDEX NAME)



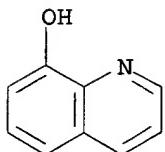
RN 139238-43-0 HCPLUS

CN Zinc(2+), [rel-(1R,4R,8S,11S)-1,4,8,11-tetraazacyclotetradecane-

.kappa.N1, .kappa.N4, .kappa.N8, .kappa.N11]-, (SP-4-2)- (9CI) (CA INDEX NAME)



IT 148-24-3, 8-Quinolinol, biological studies  
 RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (metal ion chelates in validating biol. mols. as drug targets in test animal models)  
 RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 7439-89-6D, Iron, chelates 7439-96-5D, Manganese, chelates 7439-98-7D, Molybdenum, chelates 7440-48-4D, Cobalt, chelates 7440-50-8D, Copper, chelates 7440-66-6D, Zinc, chelates 23713-49-7D, Zinc II, chelates, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (metal ion chelates in validating biol. mols. as drug targets in test animal models)  
 RN 7439-89-6 HCAPLUS  
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

Cook 09/021,421

April 22, 2004

RN 7439-96-5 HCAPLUS  
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

RN 7439-98-7 HCAPLUS  
CN Molybdenum (8CI, 9CI) (CA INDEX NAME)

Mo

RN 7440-48-4 HCAPLUS  
CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

RN 7440-50-8 HCAPLUS  
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS  
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

RN 23713-49-7 HCAPLUS  
CN Zinc, ion (Zn<sup>2+</sup>) (8CI, 9CI) (CA INDEX NAME)

Zn<sup>2+</sup>

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 50 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1996:16806 HCAPLUS  
DOCUMENT NUMBER: 124:163559  
TITLE: Flow injection sorbent extraction of metals with activated carbon and its application to flame atomic absorption spectrometry  
AUTHOR(S): Memon, M. Anwar; Wang, Xiaoru; Yang, Pengyuan; Huang, Benli  
CORPORATE SOURCE: Department Chemistry, Xiamen University, Xiamen, 361005, Peop. Rep. China  
SOURCE: Science International (Lahore) (1995), 7(1), 35-8  
CODEN: SINTE8; ISSN: 1013-5316  
PUBLISHER: Publications International  
DOCUMENT TYPE: Journal

LANGUAGE: English

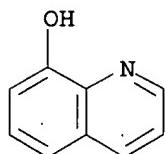
AB In the present study activated carbon was used as a sorbent material for the flow injection online sorbent extn. of metal ions combined with AA spectrometry. Online chelation of zinc was performed with 8-Hydroxyquinoline and the resultant metal chelate was adsorbed on the activated carbon, then desorbed with nitric acid and online detected with flame AAS. Various parameters affecting the zinc enrichment were optimized and the method was applied for the detn. of zinc in tap water, natural water, boiled water and tea samples. The results obtained with the present method were compared with those obtained by the ICP-AES.

IT 148-24-3, 8-Hydroxyquinoline, uses

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (chelating agent; zinc detn. in water and tea by flow injection sorbent extn. with activated carbon and flame at. absorption spectrometry)

RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 7440-66-6, Zinc, analysis

RL: ANT (Analyte); ANST (Analytical study)  
(zinc detn. in water and tea by flow injection sorbent extn. with activated carbon and flame at. absorption spectrometry)

RN 7440-66-6 HCPLUS

CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L35 ANSWER 51 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:930856 HCPLUS

DOCUMENT NUMBER: 123:349636

TITLE: Separation and determination of Zr, Co, Al, Cu and Pd as 8-hydroxyquinoline chelates by RP-HPLC

AUTHOR(S): Ruan, Yuanping; Liu, Wenyuan; Tian, Xiaoqiang; Zhao, Hong

CORPORATE SOURCE: Dept. of Chem., Xiamen Univ., Xiamen, Peop. Rep. China

SOURCE: Xiamen Daxue Xuebao, Ziran Kexueban (1995), 34(4), 582-7

CODEN: HMHHAF; ISSN: 0438-0479

PUBLISHER: Xiamen Daxue

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB HQ (8-Hydroxyquinoline) was used as a precolumn chelating reagent for the RP-HPLC detn. of Zr (IV), Co(II), Al(III), Cu(II), and Pd(II). The metal-HQ chelates were sepd. on a YWG-CH column using a mobile phase of methanol-water (75 :25, vol./vol.) not contg. HQ and buffer. The detection sensitivities of the metal-HQ chelates at 254 nm were increased .gtoreq.5 times more than that at the VIS-range wavelength. The retentive

behavior of many metal-HQ chelates was studied. The conditions of the sepn. and detn. were optimized. The detection limits were: Zr 0.25, Co 0.038, Al 0.12, Cu 0.40, and Pd 0.28 ng. The method was applied to anal. the polluted water.

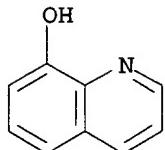
IT 7440-48-4, Cobalt, analysis 7440-50-8, Copper, analysis  
 RL: ANT (Analyte); ANST (Analytical study)  
 (sepn. and detn. in water as hydroxyquinoline chelates by RP-HPLC)  
 RN 7440-48-4 HCAPLUS  
 CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT 148-24-3, 8-Hydroxyquinoline, uses  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
 (sepn. and detn. in water as hydroxyquinoline chelates by  
 RP-HPLC)  
 RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)

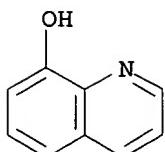


L35 ANSWER 52 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1995:836060 HCAPLUS  
 DOCUMENT NUMBER: 123:351670  
 TITLE: The Effect of High-Speed Stirring on the Distribution Equilibria of Neutral Metal Chelates  
 AUTHOR(S): Dietz, Mark L.; Sperline, Roger  
 CORPORATE SOURCE: Department of Chemistry, University of Arizona,  
 Tucson, AZ, 85721, USA  
 SOURCE: Langmuir (1995), 11(10), 3766-71  
 CODEN: LANGD5; ISSN: 0743-7463  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB When a 2-phase system comprising an org. soln. of any of various interfacially active neutral metal chelates in contact with an appropriate buffered aq. phase is agitated vigorously, a reversible decrease in the org. phase concn. of the chelate is obsd. This decrease gives rise to a shift in the pH<sub>1/2</sub> value of the metal ion (i.e., the pH corresponding to 50% extn.) from that obsd. in the corresponding unstirred system. The magnitude of this shift varies with the distribution const. of the chelate, the interfacial area generated upon stirring, and the org.

solvent. In systems in which a pair of extractable metal chelates differing in interfacial activity is present, the shifts in pH1/2 alter the apparent selectivity of the chelating extractant and enhance the sepn. of the metal ions.

IT 148-24-3D, 8-Quinolinol, transition metal chelates  
 7440-50-8, Copper, processes 7440-50-8D, Copper,  
 chelates  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (high-speed stirring effect on neutral metal chelate  
 distribution equil. in extn. systems)

RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

L35 ANSWER 53 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1995:589220 HCAPLUS  
 DOCUMENT NUMBER: 123:152413  
 TITLE: Synthesis and application of an inert type of  
 8-hydroxyquinoline-based chelating ion exchanger for  
 sea-water analysis using online inductively coupled  
 plasma mass spectrometry detection  
 AUTHOR(S): Seubert, A.; Petzold, G.; McLaren, J. W.  
 CORPORATE SOURCE: Inst. Anorg. Chem., Univ. Hannover, Hannover, D-30167,  
 Germany  
 SOURCE: Journal of Analytical Atomic Spectrometry (1995),  
 10(5), 371-9  
 CODEN: JASPE2; ISSN: 0267-9477  
 PUBLISHER: Royal Society of Chemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB An inert type of chelating ion exchanger was prep'd. by Friedel-Crafts  
 alkylation of 8-hydroxyquinoline (8-HQ) with a previously chloromethylated  
 polystyrene-divinylbenzene (PS/DVB) co-polymer. This type of  
 Friedel-Crafts alkylation using a polymer alkylhalogenid results in an  
 exchange capacity of 2.8 .mu.mol Cu<sup>2+</sup>/mL bed vol. Because of the high  
 formation consts. of most transition and heavy metal ion complexes with

8-HQ, the low exchange capacity is still sufficient to preconcn. a wide variety of ions from a high ionic strength sample such as seawater. Introduction of a high-performance cation-exchange column into the elution flow-path significantly enhanced the method's selectivity. From an initial set of 32 elements, it is possible to preconcn. 25 elements with a recovery of at least 50%. The majority of trace elements show a recovery of 60-90%. Introduction of a cation-exchange column into the elution flow path eliminated several remaining interferences. The basic performance, such as recovery and elution behavior, and first results of applied anal. of seawater using the Nearshore Seawater Ref. Material for Trace Metals, CASS-2 (National Research Council of Canada) are given. Online detection using inductively coupled plasma mass spectrometry allows trace anal. at the low ng/L range in seawater, which is the normal concn. level for most trace elements.

IT 7439-89-6, Iron, analysis 7439-96-5, Manganese, analysis  
 7440-48-4, Cobalt, analysis 7440-50-8, Copper, analysis  
 7440-66-6, Zinc, analysis  
 RL: ANT (Analyte); ANST (Analytical study)  
 (trace element detn. in seawater by online inductively coupled plasma mass spectrometry following preconcn. on 8-hydroxyquinoline-based chelating ion exchanger)  
 RN 7439-89-6 HCAPLUS  
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

### Fe

RN 7439-96-5 HCAPLUS  
 CN Manganese (8CI, 9CI) (CA INDEX NAME)

### Mn

RN 7440-48-4 HCAPLUS  
 CN Cobalt (8CI, 9CI) (CA INDEX NAME)

### Co

RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

### Cu

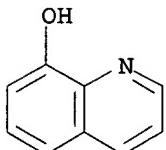
RN 7440-66-6 HCAPLUS  
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

### Zn

IT 148-24-3, 8-Hydroxyquinoline, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (trace element detn. in seawater by online inductively coupled plasma

mass spectrometry following preconcn. on 8-hydroxyquinoline-based  
chelating ion exchanger)

RN 148-24-3 HCPLUS  
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



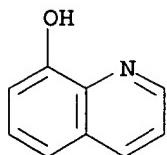
L35 ANSWER 54 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1995:452276 HCPLUS  
DOCUMENT NUMBER: 122:196566  
TITLE: Cosmetic composition containing alpha hydroxy acids  
and chelating agents  
INVENTOR(S): Bartolone, John; Rawlings, Anthoney Vincent; Sabin,  
Robert  
PATENT ASSIGNEE(S): Unilever PLC, UK; Unilever NV  
SOURCE: PCT Int. Appl., 34 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9503032	A1	19950202	WO 1994-EP2456	19940723
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN RW: KE, MW, SD, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2161525	AA	19950202	CA 1994-2161525	19940723
AU 9475327	A1	19950220	AU 1994-75327	19940723
EP 711144	A1	19960515	EP 1994-925390	19940723
R: CH, DE, ES, FR, GB, IT, LI, NL, SE IN 182731	A	19990703	IN 1994-BO351	19940803
PRIORITY APPLN. INFO.:			US 1993-96878	A 19930726
			WO 1994-EP2456	W 19940723

AB A skin treatment compn. is provided comprising an alpha hydroxy acid, a salt or ester thereof, and a chelating agent. The chelating agent is selected from the group having an affinity with zinc ion of greater than 9.2, and an affinity with magnesium ion of greater than 1.9. The efficacy of 300mM 2-hydroxyoctanoic acid and 5mm hydroxyquinoline in corneocyte release assay was shown. A topical skin compn. contained procetyl AWS 6.3, proglyceryl-6-oleate 14.7, Labrasol 17.6, water 0.166, 99% L-lactic acid 9.524, EDTA 0.2, Schercemol 185 20.68, Trivent OC-16 16.28, Silicone fluid 344 8.8, squalene 5.5, ceramide II 0.25%.  
IT 148-24-3, 8-Hydroxyquinoline, biological studies  
23713-49-7, Zinc ion, biological studies  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(cosmetic compn. contg. alpha hydroxy acids and chelating

*amt<sup>7</sup>*

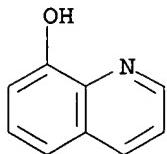
agents)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 23713-49-7 HCPLUS  
 CN Zinc, ion (Zn2+) (8CI, 9CI) (CA INDEX NAME)

Zn<sup>2+</sup>

L35 ANSWER 55 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1995:333887 HCPLUS  
 DOCUMENT NUMBER: 123:153959  
 TITLE: Studies of ferric chelate compounds by using Cu-ISEs  
 AUTHOR(S): Wei, Changming; Chen, Lianshan; Ma, Guizhi; He, Zhonglin  
 CORPORATE SOURCE: Dep. Pharmaceutics, Jiamushi Academiae Medicinae, Jiamushi, 154001, Peop. Rep. China  
 SOURCE: Liaoning Shifan Daxue Xuebao, Ziran Kexueban (1994), 17(3), 217-21  
 CODEN: LSDKEQ; ISSN: 1000-1735  
 PUBLISHER: Liaoning Shifan Daxue  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese  
 AB Cu-ISEs is used in this study to examine ferric-Tiron and ferric-oxine chelate compds. It is found that a 1:1 complex for ferric-Tiron in pH = 2.1 and 1:1 and 1:2 complexes for ferric-oxine in pH = 3.08 are formed. The compn. and the apparent stability consts. of these complexes can be calcd. from the data of concn. cells with the potentiometric titrn., using our previous work .DELTA.E = E1 - E2 = RTnFln.PHI., where .PHI. is apparent complexion function.  
 IT 148-24-3, Oxine, properties 7439-89-6D, Iron, chelate compds.  
 RL: PRP (Properties)  
 (studies of ferric chelate compds. by using Cu-ISEs)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)

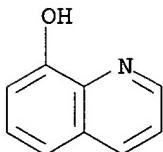


RN 7439-89-6 HCPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

L35 ANSWER 56 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1995:195188 HCPLUS  
 DOCUMENT NUMBER: 122:204025  
 TITLE: One-drop flame atomic absorption spectrometry of metals using direct nebulization of chlorinated hydrocarbon extracts of metal chelates  
 AUTHOR(S): Kojima, Isao; Inagaki, K.; Kondo, S.  
 CORPORATE SOURCE: Laboratory of Analytical Chemistry, Nagoya Institute of Technology, Nagoya, 466, Japan  
 SOURCE: Journal of Analytical Atomic Spectrometry (1994), 9 (10), 1161-5  
 CODEN: JASPE2; ISSN: 0267-9477  
 PUBLISHER: Royal Society of Chemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The flame at. absorption spectrometric behavior of metals extd. into nonflammable chlorinated hydrocarbon solvents (dichloromethane, chloroform and carbon tetrachloride) as their neutral chelates or as ion-paired complexes was studied by a 1-drop method with direct nebulization of small vols. of org. exts. and with deuterium background correction. Direct nebulization of org. exts. into a fuel-lean air-acetylene flame gave interesting background-cor. signal profiles, depending on the metals and not depending on extn. agents and solvents. The signal profiles were roughly correlated with the charring and atomizing temps. of the metals in electrothermal at. absorption spectrometry and with the dissocn. energies of the metal monoxides. Direct nebulization into a dinitrogen oxide-acetylene flame gave a simple signal profile, not dependent on the metals. Direct injection of 20-40 .mu.L aliquots of org. exts. of Co, Cu, Fe, Mg, Mn and Ni chelates into an air-acetylene flame gave the max., const. and reproducible spike-like signals. Direct nebulization of .apprx.50 .mu.L of org. exts. of Ag, Cd, Pb and Zn chelates also gave very sensitive spike-like signals, compared with those obtained by nebulization of aq. metal solns. With the combined use of extn. concn., this small injection vol. of .ltorsim.60 .mu.L resulted in a very sensitive and reproducible flame at. absorption spectrometric detn. of trace amts. of Ag, Cd, Pb and Zn in sold samples without deuterium background correction.  
 IT 148-24-3, Quinolin-8-ol, uses  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
 (in one-drop flame at. absorption spectrometry of metals using direct nebulization of chlorinated hydrocarbon exts. of metal chelates )  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 7439-89-6, Iron, analysis 7439-96-5, Manganese, analysis  
 7440-48-4, Cobalt, analysis 7440-50-8, Copper, analysis  
 7440-66-6, Zinc, analysis  
 RL: ANT (Analyte); ANST (Analytical study)  
 (one-drop flame at. absorption spectrometry of metals using direct  
 nebulization of chlorinated hydrocarbon exts. of metal chelates)  
 RN 7439-89-6 HCAPLUS  
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

## Fe

RN 7439-96-5 HCAPLUS  
 CN Manganese (8CI, 9CI) (CA INDEX NAME)

## Mn

RN 7440-48-4 HCAPLUS  
 CN Cobalt (8CI, 9CI) (CA INDEX NAME)

## Co

RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

## Cu

RN 7440-66-6 HCAPLUS  
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

## Zn

L35 ANSWER 57 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1995:89981 HCAPLUS  
 DOCUMENT NUMBER: 122:234084  
 TITLE: The comparison of alkaline phosphatase isoenzymes of  
 blood samples obtained from different human groups  
 AUTHOR(S): Gezici, Metin; Ozdemir, Yuksel  
 CORPORATE SOURCE: Tip Fak., F.U., Turk.  
 SOURCE: Biyokimya Dergisi (1993), 18(3), 1-11  
 CODEN: BIDEDV; ISSN: 0250-4685  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Turkish  
 AB This study was done to obtain information about alk. phosphatase  
 isoenzymes from blood samples which were taken from adult, child (age 7-8  
 yr), maternal, and cord blood groups and were inhibited by heat and chem.  
 substances (EDTA or 8-hydroxyquinoline) or reactivated by chem. substances  
 (ZnSO<sub>4</sub>). The levels of alk. phosphatase activity in serum and plasma  
 samples were detd. for these groups and measured with the

p-nitrophenylphosphate method following heat, chem. inhibition with EDTA, 8-hydroxyquinoline and reactivation with ZnSO<sub>4</sub>. According to the initial enzyme activity levels, the values obtained with inhibition and reactivation were calcd. as a percentage of remainder activity. EDTA and 8-hydroxyquinoline decreased the total activity of alk. phosphatase levels. Following the inhibition with EDTA and 8-hydroxyquinoline, the highest level of reactivation with ZnSO<sub>4</sub> was seen in maternal and adult groups, resp. It was obsd. that 8-hydroxyquinoline, as a chelator, does not affect the Zn<sup>+</sup> concn. Statistical evaluation of these groups indicated; inhibition by EDTA and 65.degree.C were similar for blood samples from different human groups. It is thought that the Zn<sup>+2</sup> affinity for placental alk. phosphatase and placental-like alk. phosphatase isoenzymes is lower than other alk. phosphatase isoenzymes.

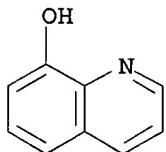
IT 7440-66-6, Zinc, biological studies  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (activator; comparison of alk. phosphatase isoenzymes of blood samples obtained from different human groups)

RN 7440-66-6 HCPLUS  
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

## Zn

IT 148-24-3, 8-Hydroxyquinoline, biological studies  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (chelator; comparison of alk. phosphatase isoenzymes of blood samples obtained from different human groups)

RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L35 ANSWER 58 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1994:667546 HCPLUS  
 DOCUMENT NUMBER: 121:267546  
 TITLE: Cu(II) chelates with nitrogen-, oxygen- and sulfur-containing ligands as inhibitors of "aging" of silver halide photographic layers  
 AUTHOR(S): Mikhailov, Oleg V.  
 CORPORATE SOURCE: Kazan State Technological University, Kazan, 420015, Russia  
 SOURCE: Journal of Imaging Science and Technology (1994), 38(3), 234-40  
 CODEN: JIMTE6; ISSN: 1062-3701  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The influence of Cu(II) chelate complexes with nitrogen-, oxygen-, and sulfur-contg. org. ligands on the spontaneous redn. of silver halides in

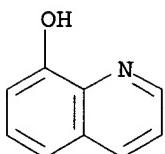
thin gelatin layers has been studied. It has been shown that decisive factors of this influence are the ability of Cu(II) complexes to oxidize the elemental silver, their ability to adsorb onto silver halide microcrystals, and the inhibiting action of the ligands. The character of the influence of Cu(II) complexes with the ligands studied on the above-mentioned process has been investigated.

IT 148-24-3D, 8-Hydroxyquinoline, copper(II) complex  
7440-50-8D, Copper, complexes with nitrogen-, oxygen- and sulfur-contg. ligands

RL: PRP (Properties)  
(copper(II) chelates as aging inhibitors of silver halide  
photog. layers)

RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7440-50-8 HCPLUS  
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

L35 ANSWER 59 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1994:643947 HCPLUS

DOCUMENT NUMBER: 121:243947

TITLE: Manufacture of oxide magnetic powder

INVENTOR(S): Okabe, Kazumi

PATENT ASSIGNEE(S): Murata Manufacturing Co, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06215925	A2	19940805	JP 1993-20660	19930112

PRIORITY APPLN. INFO.: JP 1993-20660 19930112

AB In manuf. of MFe2O4 (M = bivalent Ni, Zn, Mn, and/or Co) powder, complex chelates, obtained by reaction of 8-hydroxyquinoline and the oxide-forming metal ions, are heat treated at 450-700.degree.. The obtained powder have high surface activity, easy sinterability, and uniform and small particle size.

IT 106389-78-0P, Nickel zinc ferrite

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(manuf. of magnetic powder by pyrolysis of hydroxyquinoline complex chelates)

RN 106389-78-0 HCPLUS

CN Iron nickel zinc oxide (Fe<sub>2</sub>(Ni,Zn)O<sub>4</sub>) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	4	17778-80-2
Zn	0 - 1	7440-66-6
Ni	0 - 1	7440-02-0
Fe	2	7439-89-6

IT 148-24-3DP, 8-Hydroxyquinoline, metal complexes

7439-96-5DP, Manganese, hydroxyquinoline complexes

7440-48-4DP, Cobalt, hydroxyquinoline complexes

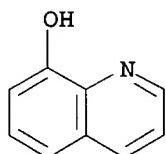
7440-66-6DP, Zinc, hydroxyquinoline complexes

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(manuf. of magnetic powder by pyrolysis of hydroxyquinoline complex chelates)

RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7439-96-5 HCPLUS

CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

RN 7440-48-4 HCPLUS

CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

RN 7440-66-6 HCPLUS

CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

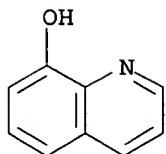
IT 148-24-3, 8-Hydroxyquinoline, reactions 7779-88-6, Zinc nitrate

RL: RCT (Reactant); RACT (Reactant or reagent)

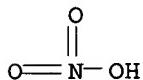
(starting material; manuf. of magnetic powder by pyrolysis of hydroxyquinoline complex chelates)

RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7779-88-6 HCAPLUS  
 CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

L35 ANSWER 60 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1994:483530 HCAPLUS  
 DOCUMENT NUMBER: 121:83530  
 TITLE: Studies in the substituted and unsubstituted  
       8-hydroxyquinoline-4-(N-p-  
       chloromethylphenyl)sulfonamide metal chelates:  
       synthetic and bacteriological  
 AUTHOR(S): Tiwari, G. D.; Tripathi, Archana; Tiwari, Anuradha;  
           Pandey, Madhuri; Mishra, Vidhyut; Kumari, Om  
 CORPORATE SOURCE: Dep. Chem., V.S.S.D. Coll., Kanpur, India  
 SOURCE: Journal of the Indian Chemical Society (1993), 70(2),  
       156  
 CODEN: JICSAH; ISSN: 0019-4522  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Title chelates I (M = Cu, Fe, Co, Cd) were prep'd. and were active  
       bactericides.  
 IT 7439-89-6DP, Iron, hydroxylquinoline sulfonamide complexes  
     7440-48-4DP, Cobalt, hydroxylquinoline sulfonamide complexes  
     7440-50-8DP, Copper, hydroxylquinoline sulfonamide complexes  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
       study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);  
       BIOL (Biological study); PREP (Preparation); USES (Uses)  
       (prepn. and bactericidal activity of)  
 RN 7439-89-6 HCAPLUS  
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

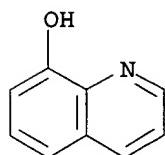
RN 7440-48-4 HCAPLUS  
 CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

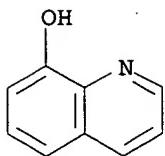
RN 7440-50-8 HCPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT 148-24-3P, 8-Hydroxyquinoline, reactions  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (prep. and sulfonamidation of, metal chelates as  
 antibacterials from)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L35 ANSWER 100 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1984:590343 HCPLUS  
 DOCUMENT NUMBER: 101:190343  
 TITLE: A simple plant nutrient solution purification method  
 for effective removal of trace metals using controlled  
 pore glass-8-hydroxyquinoline chelation column  
 chromatography  
 AUTHOR(S): Eskew, David L.; Welch, Ross M.; Cary, Earle E.  
 CORPORATE SOURCE: Soil Nutr. Lab., Agric. Res. Serv., Ithaca, NY, 14853,  
 USA  
 SOURCE: Plant Physiology (1984), 76(1), 103-5  
 CODEN: PLPHAY; ISSN: 0032-0889  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Column chelation chromatog. on controlled pore glass-8-hydroxyquinoline  
 was a very efficient method for removing trace metal contaminants from  
 concd. macronutrient salt solns. used to prep. nutrient media. With 63Ni  
 and 65Zn, controlled pore glass-8-hydroxyquinoline column packings  
 retained 99.9% of the radiotracer, and quant. recovery of the  
 radioisotopes from these columns was obtained by eluting with 1.2N HCl.  
 This method has several advantages over liq.-liq. extn. methods of purifn.  
 which previously have been used in plant micronutrient research.  
 IT 148-24-3, uses and miscellaneous  
 RL: USES (Uses)  
 (in chelation column chromatog., for trace metal removal from  
 plant nutrient soln.)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 7440-66-6, uses and miscellaneous  
 RL: REM (Removal or disposal); PROC (Process)  
 (removal of, from plant nutrient solns. by chelation column chromatog.)  
 RN 7440-66-6 HCPLUS  
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L35 ANSWER 101 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1984:185755 HCPLUS  
 DOCUMENT NUMBER: 100:185755  
 TITLE: Phenolic ethylenediamine derivatives: a study of orally effective iron chelators  
 AUTHOR(S): Hershko, Chaim; Grady, Robert W.; Link, Gabriela  
 CORPORATE SOURCE: Hadassah Med. Sch., Heb. Univ., Jerusalem, Israel  
 SOURCE: Journal of Laboratory and Clinical Medicine (1984), 103(3), 337-46  
 CODEN: JLCMAK; ISSN: 0022-2143  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Of 35 potential iron chelators screened for in vivo activity in rats, a group of phenolic compds. with excellent chelating properties were identified. These included N,N'-ethylene-bis(o-hydroxyphenylglycine) (EHPG) [1170-02-1], NN'-Bis(o-hydroxybenzyl)-ethylenediamine diacetic acid (HBED) [303-38-8], and their resp. di-Me esters (dmEHPG [90044-13-6] and dmHBED [85120-52-1]. All 4 phenolic compds. produced a marked increase in the fecal excretion of hepatocellular radioiron. This amounted to 42% of total body radioactivity with dmEHPG, 58% with EHPG, 60% with HBED, and 80% with dmHBED after a single injection of 40 mg/animal. At a dose of 5 mg/animal, EHPG, HBED, and dmHBED were 9, 12, and 15 times more potent, resp., than deferoxamine. Both di-Me esters showed significant oral activity: oral dmEHPG retained 1/3 and dmHBED retained 2/3 of the effect of the same dose given by i.m. injection. The ester dmHBED combines oral effectiveness with superior chelating ability, selective hepatocellular action, and low apparent toxicity. It may represent a significant advance in the development of new iron-chelating drugs.

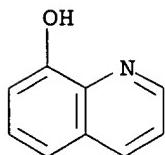
IT 7439-89-6, biological studies  
 RL: BIOL (Biological study)  
 (chelators, phenolic ethylenediamine derivs. as)  
 RN 7439-89-6 HCPLUS  
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

IT 148-24-3, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (iron-chelating activity of)

RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L35 ANSWER 102 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1984:28959 HCAPLUS

DOCUMENT NUMBER: 100:28959

TITLE: Studies on the chelating agent-impregnated resins for the adsorption and separation of metal ions. I.

8-Hydroxyquinoline-impregnated resins

AUTHOR(S): Lee, Dai Woon; Lee, Tack Hyuck; Park, Kwang Ha

CORPORATE SOURCE: Dep. Chem., Yonsei Univ., Seoul, 120, S. Korea

SOURCE: Taehan Hwahakhoe Chi (1983), 27(5), 353-60

CODEN: DHWHAB; ISSN: 0418-2472

DOCUMENT TYPE: Journal

LANGUAGE: Korean

AB The adsorption behavior of 8-hydroxyquinoline (8HQ) on Amberlite XAD-4 and XAD-7 resins was investigated by measuring its distribution coeffs. under various exptl. conditions, such as shaking time, pH, and concn. of MeOH in the medium. The application of 8HQ-impregnated-XAD resins for the adsorption and sepn. of metal ions was studied. The max. adsorption of 8HQ on XAD resins was obsd. in 30% MeOH soln. at pH 6.0-9.0. The impregnation capacities of XAD resins for 8HQ were 3.81 .times. 10<sup>-2</sup> and 2.60 .times. 10<sup>-2</sup> mmol 8HQ/g, XAD-4 and XAD-7 resin, resp. The 8HQ-impregnated-XAD resins were stable at pH 6.0-10.0 and the amt. of 8HQ leached from XAD-4 resin by eluting with 5M HCl was negligible. The optimum pH range for the adsorption of metal ions on 8HQ-impregnated XAD resin was also 6.0-10.0, and the adsorption mole ratio of metal ion to 8HQ was 1:2 for Cu(II), Cd(II), and Ni(II), and 1:3 for Fe(III) at the above pH range. The absorbed metal ions were recovered quant. with 5M HCl and 8HQ-impregnated-XAD-4 resin could be reused >5 times without decrease in its impregnation capacity.

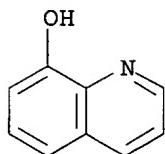
IT 148-24-3, uses and miscellaneous

RL: USES (Uses)

(Amberlite XAD-4 and XAD-7 impregnated with, as chelating ion exchanger for sepn. of transition metals)

RN 148-24-3 HCAPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



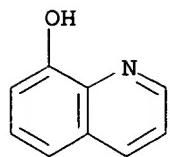
IT 7439-89-6, analysis 7440-50-8, analysis  
 RL: ANST (Analytical study)  
 (sepn. of, by ion-exchange chromatog. on hydroxyquinoline-impregnated  
 Amberlite XAD resins)  
 RN 7439-89-6 HCAPLUS  
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

## Fe

RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

## Cu

L35 ANSWER 103 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1984:28951 HCAPLUS  
 DOCUMENT NUMBER: 100:28951  
 TITLE: Chromatography of metal chelates. VII. Thin-layer chromatography of metal chelates of 8-mercaptopquinoline and its coordination site derivatives  
 AUTHOR(S): Schneeweis, G.; Koenig, K. H.  
 CORPORATE SOURCE: Inst. Anorg. Chem., Univ. Frankfurt/Main,  
 Frankfurt/Main, D-6000/50, Fed. Rep. Ger.  
 SOURCE: Fresenius' Zeitschrift fuer Analytische Chemie (1983),  
 316(1), 16-22  
 CODEN: ZACFAU; ISSN: 0016-1152  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 AB The influence of different coordination sites at the quinoline structure on the formation of metal chelates and their thin-layer chromatog. is examd. with metal chelates of 8-hydroxyquinoline, 8-mercaptopquinoline, 8-selenoquinoline, 8-hydroxyquinoline N-oxide, 8-mercaptopquinoline N-oxide, 2-hydroxyquinoline N-oxide, and 2-mercaptopquinoline N-oxide. Metal chelates with the coordination sites S, N or O can be chromatographed very well, whereas metal chelates with the coordination sites N, O or O, O are adsorbed irreversibly or show strong tailing. Silica gel 60 and Al2O3 60 were used as the stationary phase. The mobile phases were CH2Cl2, CHCl3, benzene, toluene, or CCl4. Detection was by UV spectrometry.  
 IT 148-24-3D, metal chelates 7439-89-6D,  
 2-hydroxyquinoline and 2-mercaptopquinoline N-oxide complexes  
 7439-96-5D, 2-hydroxyquinoline N-oxide complexes  
 7440-48-4D, 2-hydroxyquinoline and 2-mercaptopquinoline N-oxide complexes 7440-50-8D, 2-hydroxyquinoline and 2-mercaptopquinoline N-oxide complexes 7440-66-6D, 2-hydroxyquinoline and 2-mercaptopquinoline N-oxide complexes 14494-70-3  
 14654-50-3 17926-52-2 68811-26-7  
 RL: ANT (Analyte); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)  
 (thin-layer chromatog. of)  
 RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7439-89-6 HCAPLUS  
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7439-96-5 HCAPLUS  
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

RN 7440-48-4 HCAPLUS  
CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

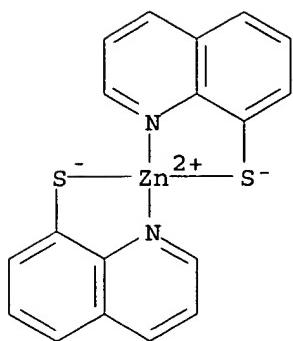
RN 7440-50-8 HCAPLUS  
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS  
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

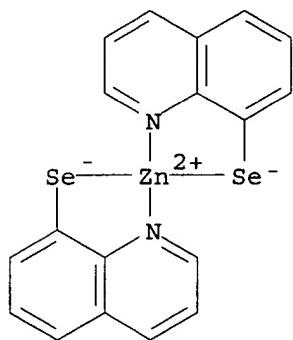
Zn

RN 14494-70-3 HCAPLUS  
CN Zinc, bis(8-quinolinethiolato-.kappa.N1,.kappa.S8)-, (T-4)- (9CI) (CA INDEX NAME)



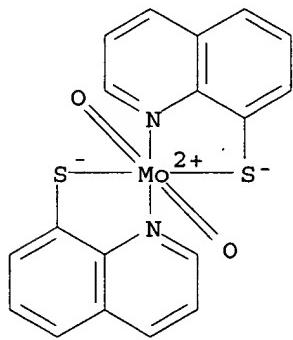
RN 14654-50-3 HCAPLUS

CN Zinc, bis(8-quinolineselenolato-.kappa.N1,.kappa.Se8)-, (T-4)- (9CI) (CA INDEX NAME)



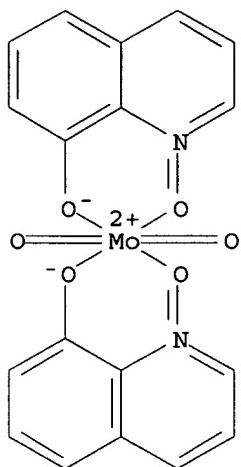
RN 17926-52-2 HCAPLUS

CN Molybdenum, dioxobis(8-quinolinethiolato-N1,S8)- (9CI) (CA INDEX NAME)



RN 68811-26-7 HCAPLUS

CN Molybdenum, dioxobis(8-quinolinol 1-oxidato-O,O')- (9CI) (CA INDEX NAME)



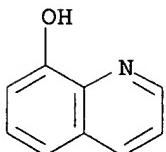
L35 ANSWER 104 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1983:593198 HCPLUS  
 DOCUMENT NUMBER: 99:193198  
 TITLE: Removal of impurities from beverages  
 INVENTOR(S): Loubser, Gert Jacobus  
 PATENT ASSIGNEE(S): Stellenbosch Farmers Winery Ltd., S. Afr.  
 SOURCE: S. African, 14 pp.  
 CODEN: SFXXAB  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

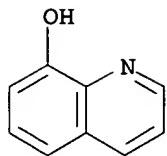
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ZA 8103988	A	19830126	ZA 1981-3988	19810612
PRIORITY APPLN. INFO.:			ZA 1980-1521	19800314

AB Fe, Cu, or H<sub>2</sub>S are removed from beverages by passing the beverage through a column of resin beads contg. the appropriate **chelating** group. Thus, 4 g Duolite ES-365 [87659-17-4] ion-exchange resin beads was treated to contain the functional groups of 8-hydroxyquinoline [148-24-3]. Two liters of wine contg. 50 ppm Fe and 10 ppm Cu was passed through the column at a rate of 7 bed vols./h. The Fe and Cu contents were reduced to <1 and <0.1 ppm, resp., with no change of pH or sensory properties. The same resin beads satd. with Cu removed H<sub>2</sub>S from wine.

IT 148-24-3, uses and miscellaneous  
 RL: BIOL (Biological study)  
 (ion exchanger treated with, beverage treatment with)

RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)





IT 7439-89-6, biological studies 7440-50-8, biological studies  
 RL: REM (Removal or disposal); PROC (Process)  
 (removal of, from beverages with chelating resin)  
 RN 7439-89-6 HCPLUS  
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

## Fe

RN 7440-50-8 HCPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

## Cu

L35 ANSWER 105 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1983:517401 HCPLUS  
 DOCUMENT NUMBER: 99:117401  
 TITLE: Evaluation of some physicochemical techniques for the determination of the fraction of dissolved copper toxic to the marine diatom *Nitzschia closterium*  
 AUTHOR(S): Florence, T. M.; Lumsden, B. G.; Fardy, J. J.  
 CORPORATE SOURCE: Div. Energy Chem., CSIRO, Sutherland, NSW 2232, Australia  
 SOURCE: *Analytica Chimica Acta* (1983), 151(2), 281-95  
 CODEN: ACACAM; ISSN: 0003-2670  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The toxicity of Cu to *N. closterium* was detd. by growth rate measurements in the presence of several Cu complexing agents, both natural and synthetic. The measurements were made in raw, unenriched sea water to avoid the reaction of Cu with silicate or colloidal hydrated Fe<sub>2</sub>O<sub>3</sub> which occurs in std. culture media. The algae remained in exponential growth for at least 72 h in unenriched sea water and, in the presence of Cu, produced an exudate which decreased the concn. of labile Cu. Labile Cu was measured in the algal assay solns. by using anodic stripping voltammetry (a.s.v.) at different deposition potentials, by sepn. on iminodiacetate (Chelex-100) and thiol resins, and by extn. with hexane/n-BuOH (9:1) to simulate lipid solv. No consistent correlation was obsd. between the toxic fraction of Cu measured by algal assay, and the labile Cu detd. by the physicochem. techniques. Although some of the naturally occurring ligands (e.g., fulvic acid and Fe-humic acid colloid) gave reasonable agreement between the toxic fraction and a.s.v.-labile Cu, the chelating resins usually grossly overestimated toxicity. Lipid-sol. complexes of Cu with synthetic ligands (e.g., 8-quinolinol [148-24-3] and diethyldithiocarbamic acid [147-84-2]) were highly toxic; as little as 2 .mu.g Cu/L in the presence of 5 times. 10-8M

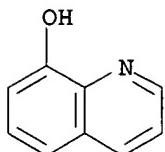
8-quinolinol caused complete depression of algal growth. Apparently, the extreme toxicity of lipid-sol. Cu complexes results from their ability to catalyze the intercellular formation of highly destructive hydroxyl free radicals from mol. O<sub>2</sub> in a Fenton-type reaction.

IT 148-24-3, biological studies 7439-89-6D, humic acid complexes

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(copper toxicity to marine diatom response to)

RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7439-89-6 HCPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

## Fe

IT 7440-50-8, biological studies

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
(toxicity of, to marine diatom, complexing agents effect on)

RN 7440-50-8 HCPLUS

CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

## Cu

L35 ANSWER 106 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1983:508573 HCPLUS

DOCUMENT NUMBER: 99:108573

TITLE: Recovery of metals from electroplating wastes using liquid-liquid extraction

AUTHOR(S): Clevenger, Tom E.; Novak, John T.

CORPORATE SOURCE: Environ. Trace Subst. Res. Cent., Univ. Missouri, Columbia, MO, USA

SOURCE: Journal - Water Pollution Control Federation (1983), 55(7), 984-9

CODEN: JWPFA5; ISSN: 0043-1303

DOCUMENT TYPE: Journal

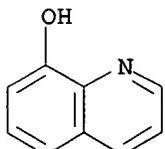
LANGUAGE: English

AB Chelating agents were used in liq.-liq. extn. for Ni, Cu, Cr, Cd, and Zn sepn. and recovery. The chelating compds. used were acetylacetone [123-54-6] thenoyltrifluoracetone [326-91-0], Na-diethyldithiocarbamate [148-18-5], and 8-hydroxyquinoline [148-24-3]. Because none of these chelating compds.

individually were capable of selectively sepg. all of the 5 elements of interest, their capabilities were studied by using them together and in

different sequential extrn. schemes. A severe economic limitation to this recovery method was the inability of any of the chelating agents to be reused once they had been stripped with HCl because of loss of extrn. capabilities.

IT 148-24-3, uses and miscellaneous  
 RL: USES (Uses)  
 (in metal recovery from electroplating waste)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 7440-50-8P, preparation 7440-66-6P, preparation  
 RL: PUR (Purification or recovery); PREP (Preparation)  
 (recovery of, from electroplating wastes, by liq.-liq. extrn., with  
 chelating agents)  
 RN 7440-50-8 HCPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCPLUS  
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

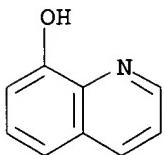
L35 ANSWER 107 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1983:137586 HCPLUS  
 DOCUMENT NUMBER: 98:137586  
 TITLE: In vivo evaluation of new iron chelating drugs  
 AUTHOR(S): Hershko, C.; Grady, R. W.; Link, G.; Sarel, S.;  
 Avramovici-Grisaru, S.  
 CORPORATE SOURCE: Dep. Med., Shaare Zedek Med. Cent., Jerusalem, Israel  
 SOURCE: Biochem. Physiol. Iron, Proc. Int. Conf. Proteins Iron Storage Transp., 5th (1982), Meeting Date 1981,  
 627-48. Editor(s): Saltman, Paul; Hegenauer, Jack.  
 Elsevier: New York, N. Y.  
 CODEN: 49AHA2  
 DOCUMENT TYPE: Conference  
 LANGUAGE: English  
 AB To det. the ability of 21 compds. to enhance the excretion of chelated Fe, 59FeCl3 in tracer amts. was incubated in vitro with 10 mg of each compd. and injected s.c. into rats. With these compds., urinary and fecal excretion of radioactivity was identical with or greater than spontaneous excretion in untreated control animals. The organ distribution of retained radioactivity was identical with the distribution of radioactivity in untreated controls, indicating free exchange of injected

radioiron with transferrin. Combined urinary and fecal radioiron excretion was similar to that obtained with Desferal [70-51-9] in 7 of the 21 compds. tested. However, unlike Desferal, most compds. caused significant fecal excretion. A discussion and review of the development of selective radioiron probes for the study of storage Fe behavior, animal models for studying the interaction of Fe chelating drugs with different storage pools, and studies of the mechanism of Fe chelation in man are presented.

IT 7439-89-6, biological studies  
 RL: BIOL (Biological study)  
 (chelators, screening of)  
 RN 7439-89-6 HCPLUS  
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

## Fe

IT 148-24-3, biological studies  
 RL: BIOL (Biological study)  
 (iron chelation therapy with)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)

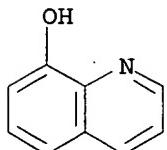


L35 ANSWER 108 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1983:29159 HCPLUS  
 DOCUMENT NUMBER: 98:29159  
 TITLE: Study of the toxic effect of chelators to the hippocampus  
 AUTHOR(S): Toroptsev, I. V.; Eshchenko, V. A.  
 CORPORATE SOURCE: Med. Inst., Tomsk, USSR  
 SOURCE: Farmakologiya i Toksikologiya (Moscow) (1982), 45(6), 82-4  
 CODEN: FATOAO; ISSN: 0014-8318  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 AB dithizone [60-10-6], 8-(p-toluoylsulfonilamino)quinoline [10304-39-9], 8-(benzenesulfonylamino)quinoline (I) [16082-59-0] and oxine [148-24-3] at 10-100 mg/kg and Na diethyldithiocarbamate [148-18-5] at 0.5-1 g/kg caused biphasic behavior response in mice. The 1st phase of the response was increased motor activity and the highest activity was due to I. Intensification of the motor activity and assocd. convulsions was independent of the in vitro reaction of the chelators with Zn in hippocampal synapses. The 2nd phase of the response was characterized by a decrease in the motor activity; the animals tended to localize in places. The extent of redn. in the motor activity correlated with the degree of in vitro histochem. reaction of the chelates with Zn in Ammon's horn. In the 2nd phase, the Zn concn. decreased in hippocampal synapses.

IT 7440-66-6, biological studies  
 RL: BIOL (Biological study)  
 (chelating agents binding with, hippocampus toxicity in relation to)  
 RN 7440-66-6 HCAPLUS  
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

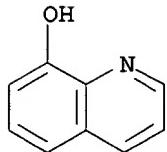
IT 148-24-3, biological studies  
 RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
 (toxicity of, to hippocampus, zinc complexation in relation to)  
 RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L35 ANSWER 109 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1982:616859 HCAPLUS  
 DOCUMENT NUMBER: 97:216859  
 TITLE: Studies on the polymer reaction of chloromethyl polystyrene. III. Preparation of ethylenediamine ligand type and aminomethylhydroxyquinoline type chelate resins  
 AUTHOR(S): Park, Soo Young; Hong, Sung Il  
 CORPORATE SOURCE: Coll. Eng., Seoul Natl. Univ., Seoul, S. Korea  
 SOURCE: Polymer (Korea) (1982), 6(5), 323-35  
 CODEN: POLLGD; ISSN: 0379-153X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Insol. divinylbenzene styrene copolymer [9003-70-7] beads were obtained by std. suspension polymn. techniques. These beads were chloromethylated with ClCH<sub>2</sub>OMe in the presence of anhyd. ZnCl<sub>2</sub>. Alternatively, chloromethylated polystyrene beads were prep'd. by the homopolymn. of chloromethylstyrene(I) or by the copolymn. of I with styrene and divinylbenzene. The chloromethylated polystyrenes were reacted with ethylenediamine in DMF/water soln. to obtain diamine ligand-type chelate resins. In the reaction of the chloromethyl group with ethylenediamine, site-site interactions were investigated. Cu<sup>2+</sup> chelation capacity was detd. by the batch equilibration method at pH 5. Aminomethylhydroxyquinoline-type chelate resin was prep'd. by the N-alkylation of diamine ligand-type chelate resin with 5-chloromethyl-8-hydroxyquinoline HCl.  
 IT 7440-50-8DP, complexes with chloromethylated styrene-ethylenediamine-hydroxyquinoline reaction product  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prep'n. and characterization of)  
 RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT 148-24-3DP, reaction products with chloromethylated polystyrenes and ethylenediamine  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prep. and metal chelation properties of)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)

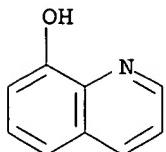


L35 ANSWER 110 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1982:485290 HCPLUS  
 DOCUMENT NUMBER: 97:85290  
 TITLE: Evaluation of iron-chelating agents in an in vivo system: potential usefulness of EHPG, a powerful iron-chelating drug  
 AUTHOR(S): Hershko, Chaim; Grady, Robert W.; Link, Gabriela  
 CORPORATE SOURCE: Hadassah Med. Sch., Heb. Univ., Jerusalem, Israel  
 SOURCE: British Journal of Haematology (1982), 51(2), 251-60  
 CODEN: BJHEAL; ISSN: 0007-1048  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Fifteen compds. with a high affinity to Fe<sup>3+</sup> have been screened for in vivo Fe-chelating efficiency in a rat model. One of the most potent of these drugs was ethylenediamine-N,N'-bis(o-hydroxyphenylglycine) (EHPG) [82647-27-6]. EHPG-induced Fe excretion was up to 8 times higher than Fe excretion induced by identical doses of desferrioxamine (DF). Studies employing selective radio-Fe probes of reticuloendothelial and parenchymal Fe stores showed that although EHPG is able to interact with both storage Fe compartments, its effect on parenchymal Fe is much more pronounced. Unlike DF, which has 2 alternative routes of excretion, EHPG-induced Fe excretion is restricted mainly to the gut. Although EHPG seems to be superior to DF in both its chelating efficiency and preferential interaction with hepatic parenchymal Fe stores, information on its in vivo toxicity is at present insufficient and it cannot yet be recommended for clin. use.  
 IT 7439-89-6, biological studies  
 RL: BIOL (Biological study)  
 (chelating agents for, evaluation of)  
 RN 7439-89-6 HCPLUS  
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

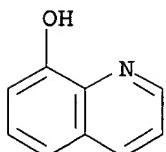
Fe

IT 148-24-3, biological studies  
 RL: RCT (Reactant); RACT (Reactant or reagent)

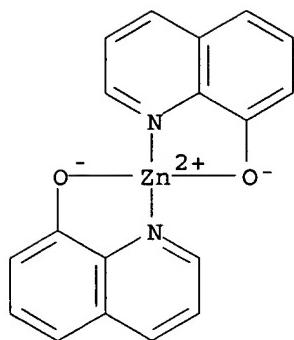
(iron chelation by)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



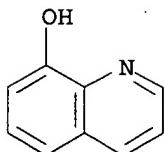
L35 ANSWER 154 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1968:35418 HCPLUS  
 DOCUMENT NUMBER: 68:35418  
 TITLE: Application of the zone melting technique to metal chelate systems. IV. Concentration of metal-8-hydroxyquinoline chelates in 8-hydroxyquinoline  
 AUTHOR(S): Kaneko, Hisamitsu; Kanagawa, Hiroshi; Kobayashi, Hiroshi; Ueno, Keihei  
 CORPORATE SOURCE: Kyushu Univ., Fukuoka, Japan  
 SOURCE: Talanta (1967), 14(12), 1411-15  
 CODEN: TLNTA2; ISSN: 0039-9140  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The zone melting technique has been applied to 8-hydroxyquinoline contg. trace amts. of various metal 8-hydroxyquinolines, such as the Ni(II), Co(II), Zn(II), and Cu(II) chelates. The metal chelate in each system was concd. in the direction of zone travel. The highest concg. effect was observed in the Cu(II) chelate system. The concn. ratio, defined as the fraction of the metal chelate concd. in the bottom 15% of the column, was detd. after the 30th passage. A trace amt. of Cu ion extd. with a large excess of 8-hydroxyquinoline was concd. by means of the zone melting technique. The concn ratio was 96%.  
 IT 148-24-3, uses and miscellaneous  
 RL: REM (Removal or disposal); PROC (Process)  
 (removal of, from its metal chelates by zone melting)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 13978-85-3  
 RL: PROC (Process)  
 (sepn. of, from 8-quinolinol by zone melting)  
 RN 13978-85-3 HCPLUS  
 CN Zinc, bis(8-quinolinolato-.kappa.N1,.kappa.O8)-, (T-4)- (9CI) (CA INDEX NAME)



L35 ANSWER 155 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1967:413881 HCPLUS  
 DOCUMENT NUMBER: 67:13881  
 TITLE: Chelation as a weathering mechanism. I. Effect of complexing agents on the solubilization of iron from minerals and granodiorite  
 AUTHOR(S): Schalscha B., Eduardo; Appelt, H.; Schatz, Albert  
 CORPORATE SOURCE: Univ. Chile, Santiago, Chile  
 SOURCE: Geochimica et Cosmochimica Acta (1967), 31(4), 587-96  
 CODEN: GCACAK; ISSN: 0016-7037  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The role of chelation as a weathering mechanism (Bull. Geol. Soc. Am. 68: 1792(1957)) is further studied. Salicylate and several naturally-occurring chelating agents, in the form of free acids or their alkali salts, extd. Fe from goethite, hematite, magnetite, epidote, augite, biotite, and granodiorite. The removal of Fe from granodiorite by salicylate was demonstrable within a matter of min. and continued for 191 hrs. K and Al were brought into soln. when salicylate reacted with epidote, microcline, and granodiorite. Salicylate and 8-hydroxyquinoline extd. Fe from epidote in nonaq. media. There was no direct correlation between pH and the dissolving action of various reagents. For this and other reasons, the results are interpreted as addnl. evidence implicating chelation as a weathering process.  
 IT 148-24-3, reactions  
 RL: USES (Uses)  
 (in rock weathering by chelation)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 7439-89-6P, properties  
 RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (leaching of, from minerals and rocks, 8-hydroxyquinoline and salicylate in)

RN 7439-89-6 HCAPLUS  
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

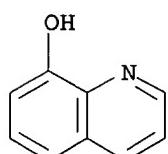
L35 ANSWER 156 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1967:86767 HCAPLUS  
 DOCUMENT NUMBER: 66:86767  
 TITLE: Coating copper with polyamides  
 PATENT ASSIGNEE(S): Metallgesellschaft A.-G.  
 SOURCE: Neth. Appl., 9 pp.  
 CODEN: NAXXAN  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Dutch  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6605493		19661121		
FR 1478274			FR	

PRIORITY APPLN. INFO.: DE 19650518  
 AB An intermediate layer of a styrene-butadiene copolymer contg. chelating agents is first applied to the Cu or Cu alloy and incompletely cured before the polylayer is applied. Thus, electrolytic Cu was pickled with dil. acid, polished, sprayed with 50 parts 20:80 styrene-butadiene copolymer and 50 parts solvent and stoved at 250.degree. after 15 min. A coating contg. 5% 8-hydroxyquinoline as chelating agent gave excellent bonding to the Cu. The coated Cu was heated to 400.degree. for 2 min. and dipped into polyundecanamide powder for 3-4 sec. Similarly, 1,2,3-benzotriazole, o-aminobenzoic acid, .alpha.-benzoin oxime, and quinaldic acid were used as chelating agents.

IT 148-24-3, uses and miscellaneous  
 RL: USES (Uses)  
 (as chelating agent in 1,3-butadiene-styrene polymer coatings on copper)

RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)

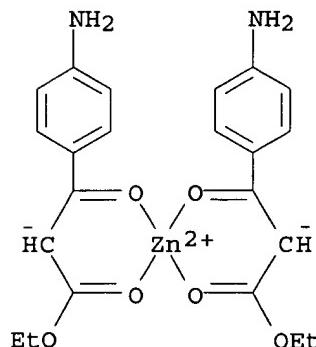


IT 7440-50-8, uses and miscellaneous  
 RL: USES (Uses)  
 (coatings on, from polyamides, chelating agent effect on)  
 RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

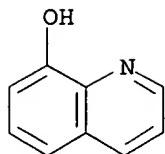
Cu

Cu

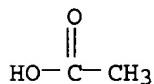
L35 ANSWER 157 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1964:452970 HCAPLUS  
 DOCUMENT NUMBER: 61:52970  
 ORIGINAL REFERENCE NO.: 61:9160d-e  
 TITLE: Metal chelates of ethyl 4-aminobenzoylacetate  
 AUTHOR(S): Donaruma, L. Guy  
 CORPORATE SOURCE: Clarkson Coll. of Technol., Potsdam, NY  
 SOURCE: Journal of Chemical and Engineering Data (1964), 9(3),  
 379-80  
 CODEN: JCEAAX; ISSN: 0021-9568  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 AB A general procedure is described for prepn. of the title chelates and chelates of other compds. by a ligand exchange process. Thus, a metal acetate and sufficient diketone to replace the OAc<sup>-</sup> were mixed in PhMe, and the HOAc was removed as the PhMe-HOAc binary azeotrope. The procedure was demonstrated for salts of Th<sup>4+</sup>, Cu<sup>2+</sup>, Al<sup>3+</sup>, Pb<sup>2+</sup>, Zn<sup>2+</sup>, Co<sup>2+</sup>, and Fe<sup>3+</sup>, and for compds. such as Ac<sub>2</sub>CH<sub>2</sub>, oxine, Bz<sub>2</sub>CH<sub>2</sub>, tropolone, 4-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>COCH<sub>2</sub>CO<sub>2</sub>Et, and 4-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>COCH<sub>2</sub>CO<sub>2</sub>Et. Where the acetate could not be used, the metal was pptd. with NH<sub>3</sub>, the ppt. washed and dissolved in HOAc, and the HOAc soln. was used in place of the metal acetate.  
 IT 101147-58-4, Zinc, bis [hydrogen (p-aminobenzoyl)acetato] -, diethyl ester  
 (prepn. of)  
 RN 101147-58-4 HCAPLUS  
 CN Zinc, bis [hydrogen (p-aminobenzoyl)acetato] -, diethyl ester (7CI) (CA INDEX NAME)



IT 148-24-3, 8-Quinolinol  
 (reaction with metal acetates in boiling toluene, chelate formation in)  
 RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 557-34-6, Zinc acetate  
 (reaction with .beta.-diketones in boiling toluene, chelate formation  
 in)  
 RN 557-34-6 HCPLUS  
 CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

L35 ANSWER 158 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1961:69524 HCPLUS  
 DOCUMENT NUMBER: 55:69524  
 ORIGINAL REFERENCE NO.: 55:13164c-d  
 TITLE: Indicators for metal titration with EDTA. II.  
 8-Quinolinol  
 AUTHOR(S): Costa, Antonio Celso Spinola  
 CORPORATE SOURCE: Univ. Bahia, Brazil  
 SOURCE: Anais assoc. brasili. quim. (1960), 19, 21-8  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 AB cf. CA 52, 16117h; 54, 22137e. When org. solvents (MeOH, EtOH, PrOH, or dioxane) are added to the titration mixt. (in 60-70% initial and over 35% final concn.), several metals can be titrated with EDTA with 8-quinolinol (I) as indicator. Zn is titrated at pH 5.5-9.5 (best 8.5-9.5) with I + methylene blue (or methyl violet); Cu at pH 5-6.5; Pb at pH 9-10 with citrate or tartrate added; Mn at pH 8-10 with ascorbic acid added; Cd at pH 8.5-10; Ni at pH 5.5-6.5; and Fe at pH 2-4, with more than the usual amt. of I.  
 IT 7439-89-6, Iron 7439-96-5, Manganese 7440-50-8  
 , Copper 7440-66-6, Zinc  
 (analysis, detn.)  
 RN 7439-89-6 HCPLUS  
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7439-96-5 HCPLUS  
 CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

## Mn

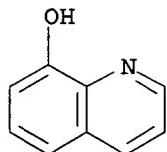
RN 7440-50-8 HCPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

## Cu

RN 7440-66-6 HCPLUS  
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

## Zn

IT 148-24-3, 8-Quinolinol  
 (as indicator, for chelatometry)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L35 ANSWER 159 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1960:123833 HCPLUS  
 DOCUMENT NUMBER: 54:123833  
 ORIGINAL REFERENCE NO.: 54:23602e-g  
 TITLE: Chelate ion-exchange resins  
 AUTHOR(S): Nakamura, Keiji; Yanagita, Masaya  
 CORPORATE SOURCE: Inst. Phys. Chem. Research, Tokyo  
 SOURCE: Scientific Papers of the Institute of Physical and Chemical Research (Japan) (1960), 54, 146-9  
 CODEN: SPIPAG; ISSN: 0020-3092  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 AB Polystyrenes contg. acetylacetone or 8-quinolinol chelating groups were prep'd. and tested as cation exchangers. Poly(vinylbenzenesulfonamide) (4.5 g.) (prep'd. from a styrene-5%-divinylbenzene copolymer by reaction with ClSO<sub>3</sub>H and NH<sub>3</sub>) was suspended in a soln. of 1 g. NaOH in 4.5 ml. tetrahydrofuran and 7.5 ml. H<sub>2</sub>O; to the suspension below 10.degree. was added 2.5 g. diketene over 1 hr., with stirring continued 1 hr. After standing overnight poly(N-acetoacetylvinylbenzenesulfonamide) was sepd. by filtration. Its Na capacity was 1.63 meq./g. Reaction of 5-aminomethyl-8-quinolinol in pyridine with a chlorosulfonated styrene-5%-divinylbenzene copolymer gave a resin contg. 8-quinolinol chelating groups. Graphs for the absorption of Fe<sup>+++</sup>, Cu<sup>++</sup>, Co<sup>++</sup>, Ni<sup>++</sup> and UO<sub>2</sub><sup>++</sup> by both resins as functions of pH were given.  
 IT 7440-50-8, Copper  
 (base exchange of, on styrene polymer resins contg. acetyl-acetone or 8-quinolinol chelating groups)

RN 7440-50-8 HCPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

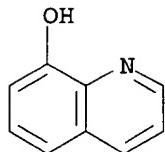
IT 7440-48-4, Cobalt  
 (base exchange of, on styrene polymer resins contg. acetylacetone or  
 8-quinolinol chelating groups)  
 RN 7440-48-4 HCPLUS  
 CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

IT 7439-89-6, Iron  
 (ion exchange of, on styrene polymer resins contg. acetylacetone or  
 8-quinolinol chelating groups)  
 RN 7439-89-6 HCPLUS  
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

IT 148-24-3, 8-Quinolinol  
 (styrene polymers contg. chelating groups of, prepn. and  
 base-exchanging properties of)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



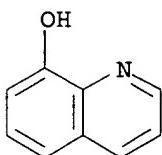
L35 ANSWER 160 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1959:108629 HCPLUS  
 DOCUMENT NUMBER: 53:108629  
 ORIGINAL REFERENCE NO.: 53:19447d-f  
 TITLE: Syntheses of metal complexing polymers. IV. Polymers containing miscellaneous functional groups  
 AUTHOR(S): Davies, R. V.; Kennedy, J.; Lane, E. S.; Willans, J.  
 L.  
 SOURCE: Journal of Applied Chemistry (1959), 9, 368-71  
 CODEN: JACHAU; ISSN: 0021-8871  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 AB cf. C.A. 53, 3032h. Resins were prep'd. contg. 8-quinolinol, .omicron.-hydroxybenzenearsonic acid, salicylic acid, and kojic acid as functional units. Two general methods were used: (1) coupling of diazotized poly(aminostyrene) with the resp. phenol or enolic compd. and

(2) condensation reactions with HCHO. Of these resins the resorcinol-salicylic acid-HCHO copolymer showed the greatest complexing capacity for Cu++ and Na+.

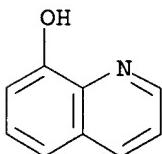
IT 7440-50-8, Copper  
 (chelating agents for, from enolic or phenolic resins)  
 RN 7440-50-8 HCPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT 148-24-3, 8-Quinolinol  
 (chelating resins from, by coupling with diazotized poly(aminostyrene) or condensation with HCHO)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L35 ANSWER 161 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1957:73773 HCPLUS  
 DOCUMENT NUMBER: 51:73773  
 ORIGINAL REFERENCE NO.: 51:13299e  
 TITLE: Effect of the interaction between chelating agents on their fungitoxicity  
 AUTHOR(S): Byrde, R. J. W.; Woodcock, D.  
 CORPORATE SOURCE: Univ. Bristol, UK  
 SOURCE: Nature (1957), 179, 539  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 AB A significant increase in the fungistatic activity was observed when ethylenediaminetetraacetic acid (EDTA) and Cu were added to 5-phenyl oxine or 5-amyl oxine when tested against Aspergillus niger. EDTA alone produced similar results.  
 IT 148-24-3, 8-Quinolinol  
 (and derivs., fungitoxicity of, chelating agents and)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 7440-50-8, Copper  
 (compounds, chelates, as fungicides)

RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

L35 ANSWER 162 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1957:61555 HCAPLUS  
 DOCUMENT NUMBER: 51:61555  
 ORIGINAL REFERENCE NO.: 51:11162b-c  
 TITLE: Complexometric titrations with azoxine indicators  
 AUTHOR(S): Fritz, James S.; Lane, Wm. J.; Bystroff, Ann Sutton  
 CORPORATE SOURCE: Iowa State Coll., Ames  
 SOURCE: Anal. Chem. (1957), 29, 821-5  
 CODEN: ANCHAM; ISSN: 0003-2700  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 AB 7-(1-Naphthylazo)-8-quinolinol-5-sulfonic acid and several related compds. are valuable as metal ion indicators in complexometric titrations. Cd, Co, Cu, Pb, Ni, rare earths, Th, Y, and Zn can be accurately titrated in H + soln. with 0.05M (ethylenedinitrilo)tetraacetate. In many cases a small amt. of Cu must be present in order for the indicator to function properly. Ca and Mg do not interfere if the pH is 5.5 or less. With citrate as a masking agent, Zn and other bivalent metals can be titrated in the presence of U(VI), Th, or Zr. The use of tartrate, fluoride, iodide, or thiourea as masking agents in certain cases also increases the selectivity of the method.  
 IT 7440-50-8, Copper  
 (analysis, detn.)  
 RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

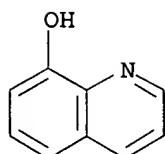
IT 7440-48-4, Cobalt 7440-66-6, Zinc  
 (analysis, detn., 8-quinolinol azo derivs. as indicators for)  
 RN 7440-48-4 HCAPLUS  
 CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

RN 7440-66-6 HCAPLUS  
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

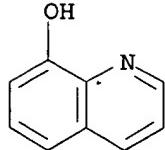
IT 148-24-3, 8-Quinolinol  
 (azo derivs., as indicators for chelatometry)  
 RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L35 ANSWER 163 OF 164 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1956:61655 HCPLUS  
 DOCUMENT NUMBER: 50:61655  
 ORIGINAL REFERENCE NO.: 50:11561a-c  
 TITLE: Selective ion exchangers from polystyrene  
 AUTHOR(S): Parrish, J. R.  
 CORPORATE SOURCE: Rhodes Univ., Grahamstown, S. Afr.  
 SOURCE: Chemistry & Industry (London, United Kingdom) (1956)  
 137  
 CODEN: CHINAG; ISSN: 0009-3068  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 AB Three selective ion exchangers were prep'd. from styrene + 2% divinylbenzene copolymers. A polythiol was prep'd. by chloromethylation followed by the formation and hydrolysis of the thiourea salt. The resin selectivity absorbed Hg; regeneration was done with ammonical aq. 1,2-dimercaptopropanol. There was no absorption of Mg in H<sup>+</sup> soln. Arsonic acid groups were introduced by the Bart reaction on 4-polyaminostyrene. The amino resin was ppt'd. by nitration and reduction with Sn and HCl. The resin showed little selectivity at pH values above 3. There was no absorption of Zn, Mg, or Ca at pH 2. Diazotized polyaminostyrene was coupled with 8-hydroxyquinoline. About 60% of the quinoline was consumed. The resulting resin absorbed Cu, Ni, and Co at pH 2-3. Zn, Mn, Al, Mg, and Co were not absorbed below pH values of 1.5, 2.0, 2.8, 4.0, and 4.8, resp. The rates of equilibration with this resin were slow.  
 IT 7440-50-8, Copper  
 (-exchanging styrene polymer derivs.)  
 RN 7440-50-8 HCPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT 148-24-3, 8-Quinolinol  
 (azo derivs., from diazotized polyaminostyrene, as chelating resins)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 7440-48-4, Cobalt  
 (exchange reactions between Co++ and Co complexes, with styrene polymer  
 derivs.)  
 RN 7440-48-4 HCAPLUS  
 CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

L35 ANSWER 164 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1955:58695 HCAPLUS  
 DOCUMENT NUMBER: 49:58695  
 ORIGINAL REFERENCE NO.: 49:11315g-i  
 TITLE: New chelating resins  
 AUTHOR(S): Parrish, J. R.  
 CORPORATE SOURCE: Rhodes Univ., Grahamstown, S. Afr.  
 SOURCE: Chemistry & Industry (London, United Kingdom) (1955)  
 386-7  
 CODEN: CHINAG; ISSN: 0009-3068  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable

AB A resin, made by the condensation of HCHO, resorcinol, and pyrogallic carboxylic acid, forms a colored complex with Ba, Ca, and Sr ions in alk. medium. At pH 10, Ca can be removed quantitatively from colored solns. (molasses), and can be recovered by washing the resin with dil. HCl. A resin prep'd. by diazotizing a resin of the .omicron.-aminophenol type, and coupling with 2-naphthol, chelates Cu at pH 3.0. Mg and Cu in a buffered pH 3.0 soln. could be sepd. quantitatively on a 10-cm. column. The Cu could be eluted from the resin with HCl. A resin prep'd. by condensing .omicron.-nitrophenol with resorcinol and HCHO, and then reducing the nitro group could be used quantitatively to sep. Cu from Ca at pH 5.5. At pH values below 4.5, the Cu was not retained quantitatively. A resin made from oxine, resorcinol, and HCHO showed chelating properties similar to those of oxine, but its capacity was very low.

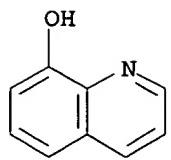
IT 7440-50-8, Copper  
 (analysis, sepn. from Ca and Mg with chelating resin)  
 RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME).

Cu

(compds., with chelating resins  
 IT 148-24-3, 8-Quinolinol  
 (reaction products of, with HCHO and resorcinol, chelating  
 resin from)  
 RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)

Cook 09/021,421

April 22, 2004



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L1 1 SEA FILE=REGISTRY ABB=ON PLU=ON 8-HYDROXYQUINOLINE/CN  
 L41 1 SEA FILE=REGISTRY ABB=ON PLU=ON ZINC CHLORIDE/CN  
 L43 233 SEA FILE=HCAPLUS ABB=ON PLU=ON L1(L) (BAC OR DMA OR PAC OR  
 PKT OR THU)/RL  
 L44 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L43 AND L41

=&gt; d iibib abs hitstr 1-4

L44 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:23106 HCAPLUS  
 DOCUMENT NUMBER: 138:83329  
 TITLE: Use of metal ion chelates in validating biological  
 molecules as drug targets in test animal models  
 INVENTOR(S): Rist, Oystein; Hogberg, Thomas; Holst Lange, Birgitte;  
 Schwartz, Thue W.; Elling, Christian E.  
 PATENT ASSIGNEE(S): 7TM Pharma A/S, Den.  
 SOURCE: PCT Int. Appl., 247 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003003009	A1	20030109	WO 2002-DK456	20020628
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2002054077	A2	20020711	WO 2001-DK867	20011221
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:			DK 2001-1026	A 20010629
			DK 2001-1027	A 20010629
			DK 2001-1028	A 20010629
			DK 2001-1030	A 20010629
			DK 2001-1031	A 20010629
			US 2001-301931P	P 20010629
			WO 2001-DK867	A 20011221
			WO 2000-EP13389	W 20001229
			DK 2001-536	A 20010330

US 2001-280237P P 20010330

OTHER SOURCE(S): MARPAT 138:83329

AB The invention discloses the use of chem. compds. or selections of chem. compds. (libraries) of the general Formula R1XFY(R1)GZR1 [F, G = N, O, S, Se, P; X, Y, Z = (un)branched C1-12 alkyl, aryl, heteroaryl, etc.; R1 = ABC; A = coupling or connecting moiety; B = spacer moiety; C = functional group] for in vivo methods for testing or validating the physiol. importance and/or the therapeutic or pharmacol. potential of biol. target mols., notably proteins such as, e.g., receptors and esp. 7TM receptors in test animals expressing the biol. target mol. with, notably, a silent, engineered metal ion site. Use of specific metal ion binding sites of a generic nature in specific biol. target mols. such as, e.g. transmembrane proteins wherein the metal ion binding site is capable of forming a complex with a metal ion is also described. Also disclosed are chem. compds. or libraries suitable for use in methods for improving the in vivo pharmacokinetic behavior of metal ion chelates (e.g. the absorption pattern, the plasma half-life, the distribution, the metab. and/or the elimination of the metal ion chelates). In order to improve the efficacy of the impact of the metal ion chelate on the biol. target mol. after administration of the metal ion chelate in vivo to a test animal, it is advantageous e.g. to increase the period during which the metal ion chelate is in the circulatory system and/or localized at the target. Further disclosed are metal ion-chelating compds. designed to be suitable for use in a target validation process according to the invention, as well as libraries of at least two or more of such metal ion-chelating compds.

IT 7646-85-7, Zinc chloride, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(metal ion chelates in validating biol. mols. as drug targets in test animal models)

RN 7646-85-7 HCAPLUS

CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

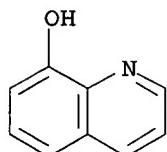
Cl-Zn-Cl

IT 148-24-3, 8-Quinolinol, biological studies

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(metal ion chelates in validating biol. mols. as drug targets in test animal models)

RN 148-24-3 HCAPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN

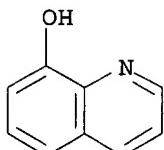
ACCESSION NUMBER: 2002:845558 HCAPLUS

DOCUMENT NUMBER: 137:346235

TITLE: Chelated 8-hydroxyquinoline for the treatment of epithelial lesions  
 INVENTOR(S): Jordan, Russel T.; Hanson, Carl C.; Potestio, Frank S.  
 PATENT ASSIGNEE(S): Dermex Pharmaceuticals, LLC, USA  
 SOURCE: U.S., 10 pp., Cont.-in-part of U.S. Ser. No. 21,421,  
       abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6476014	B1	20021105	US 2001-601304	20010102
WO 9939721	A1	19990812	WO 1999-US2817	19990210
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2003113381	A1	20030619	US 2002-247161	20020918
US 2003114484	A1	20030619	US 2002-247526	20020918
PRIORITY APPLN. INFO.: US 1998-21421 B2 19980210 WO 1999-US2817 W 19990210 US 2001-601304 A3 20010102				

AB Oxinates including 8-hydroxyquinoline and a heavy metal are topically applied to epidermal lesions for therapeutic effect, wherein the epithelial lesions are selected from cancerous and precancerous lesions, cysts, and warts; and permitting the compn. to destroy the lesion.  
 IT 148-24-3D, 8-Hydroxyquinoline, metal chelates  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
       (chelated hydroxyquinoline for treatment of epithelial lesions)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 7646-85-7, Zinc chloride, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
       (chelated hydroxyquinoline for treatment of epithelial lesions)  
 RN 7646-85-7 HCPLUS  
 CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1999:511033 HCAPLUS  
 DOCUMENT NUMBER: 131:139492  
 TITLE: Chelated 8-hydroxyquinoline for the treatment of epithelial lesions  
 INVENTOR(S): Jordan, Russel T.; Hanson, Carl C.; Potestio, Frank S.  
 PATENT ASSIGNEE(S): Dermex Pharmaceuticals, LLC, USA  
 SOURCE: PCT Int. Appl., 34 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

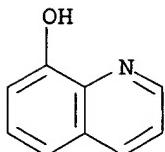
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9939721	A1	19990812	WO 1999-US2817	19990210
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2320628	AA	19990812	CA 1999-2320628	19990210
AU 9925956	A1	19990823	AU 1999-25956	19990210
AU 755521	B2	20021212		
EP 1052999	A1	20001122	EP 1999-905911	19990210
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
NZ 506367	A	20030328	NZ 1999-506367	19990210
US 6476014	B1	20021105	US 2001-601304	20010102
US 2003113381	A1	20030619	US 2002-247161	20020918
US 2003114484	A1	20030619	US 2002-247526	20020918
PRIORITY APPLN. INFO.:			US 1998-21421	A2 19980210
			WO 1999-US2817	W 19990210
			US 2001-601304	A3 20010102

AB Oxinates including 8-hydroxyquinoline and a heavy metal are topically applied to epidermal lesions for therapeutic effect. The therapeuic compn. demonstrates selective toxicity with a therapeutic index of 100% on human lung cancer, breast cancer, melanoma, venereal warts, male veruoca warts, lesions produced by human papilloma virus, basal cell carcinoma, solar keratosis, and Kaposi's sarcoma. In veterinary applications where dogs, cats, and horses are the patients, the compn. shows a 100% therapeutic index with selective toxicity against eye cancer, sarcoids, sarcoma, malignant melanoma, rectal adenoma, histiocytoma, and sebaceous adenoma.

IT 148-24-3D, 8-Hydroxyquinoline, chelates  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (chelated hydroxyquinoline for treatment of epithelial lesions)

RN 148-24-3 HCAPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 7646-85-7, Zinc chloride, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction; chelated hydroxyquinoline for treatment of epithelial lesions)  
 RN 7646-85-7 HCPLUS  
 CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

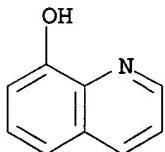
Cl-Zn-Cl

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 4 OF 4 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1993:455828 HCPLUS  
 DOCUMENT NUMBER: 119:55828  
 TITLE: Status of certain additional over-the-counter drug category II and III active ingredients  
 CORPORATE SOURCE: United States Food and Drug Administration, Rockville, MD, 20857, USA  
 SOURCE: Federal Register (1993), 58(88), 27636-44, 10 May 1993  
 CODEN: FEREAC; ISSN: 0097-6326  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Certain over-the-counter drugs are not generally recognized as safe and effective or are misbranded under the Federal Food, Drug, and Cosmetic Act. The list includes digestive, external analgesic, insect bite and sting, poison ivy, skin protectant, diaper rash, topical antifungal, and oral analgesic products.

IT 148-24-3, Oxyquinoline, biological studies 7646-85-7,  
 Zinc chloride, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (over-the-counter prepns. contg., stds. for)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7646-85-7 HCPLUS  
 CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

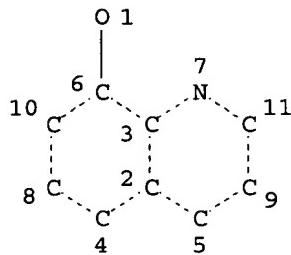
Cook 09/021,421

April 22, 2004

Cl-Zn-Cl

=> d que

L1 1 SEA FILE=REGISTRY ABB=ON PLU=ON 8-HYDROXYQUINOLINE/CN  
 L2 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L5	671	SEA FILE=REGISTRY FAM FUL L2	
L8	1054	SEA FILE=HCAPLUS ABB=ON PLU=ON	JORDAN R?/AU
L11	513	SEA FILE=HCAPLUS ABB=ON PLU=ON	HANSON C?/AU
L12	2	SEA FILE=HCAPLUS ABB=ON PLU=ON	L8 AND L11
L13	5	SEA FILE=HCAPLUS ABB=ON PLU=ON	POTESTIO F?/AU
L14	2	SEA FILE=HCAPLUS ABB=ON PLU=ON	L12 AND L13
L18	165673	SEA FILE=REGISTRY ABB=ON PLU=ON	ZN/ELS
L19	1103	SEA FILE=HCAPLUS ABB=ON PLU=ON	L5 AND L18
L20	2	SEA FILE=HCAPLUS ABB=ON PLU=ON	L14 AND L19
L23	1	SEA FILE=REGISTRY ABB=ON PLU=ON	IRON/CN
L26	1	SEA FILE=REGISTRY ABB=ON PLU=ON	COBALT/CN
L27	263268	SEA FILE=REGISTRY ABB=ON PLU=ON	MO/ELS
L29	1	SEA FILE=REGISTRY ABB=ON PLU=ON	MANGANESE/CN
L31	1	SEA FILE=REGISTRY ABB=ON PLU=ON	COPPER/CN
L32	2026	SEA FILE=HCAPLUS ABB=ON PLU=ON	L1 AND (L23 OR L18 OR L26 OR L27 OR L29 OR L31)
L34	332	SEA FILE=HCAPLUS ABB=ON PLU=ON	L1 (L) CHELAT?
L35	164	SEA FILE=HCAPLUS ABB=ON PLU=ON	L32 AND L34
L36	2	SEA FILE=HCAPLUS ABB=ON PLU=ON	L20 AND L35
L37	599	SEA FILE=HCAPLUS ABB=ON PLU=ON	"SKIN, DISEASE (L) LESION"+OLD /CT
L38	2	SEA FILE=HCAPLUS ABB=ON PLU=ON	L5 AND L37
L39	2	SEA FILE=HCAPLUS ABB=ON PLU=ON	L36 AND L38
L41	1	SEA FILE=REGISTRY ABB=ON PLU=ON	ZINC CHLORIDE/CN
L43	233	SEA FILE=HCAPLUS ABB=ON PLU=ON	L1 (L) (BAC OR DMA OR PAC OR PKT OR THU)/RL
L44	4	SEA FILE=HCAPLUS ABB=ON PLU=ON	L43 AND L41
L45	31	SEA FILE=HCAPLUS ABB=ON PLU=ON	L1 (L) (TOPICAL OR SKIN OR ) <u>LESION FOR EPITHEL? OR EPIDER? )</u>
L46	11	SEA FILE=HCAPLUS ABB=ON PLU=ON	L45 AND L43
L47	9	SEA FILE=HCAPLUS ABB=ON PLU=ON	L46 NOT L44
L48	9	SEA FILE=HCAPLUS ABB=ON PLU=ON	L47 NOT L39

=> d 148 ibib ab hitstr 1-9

L48 ANSWER 1 OF 9 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:855800 HCPLUS  
 DOCUMENT NUMBER: 139:354144  
 TITLE: Materials with zinc ionophoric behavior for treating skin or hair microbial infections and dandruff  
 INVENTOR(S): Schwartz, James Robert; Poison, George; Turley, Patricia A.; Nelson, John D.; Gavin, David F.; Roberts, Katherine P.; Margraf, Carl Hinz, III; Kaufman, David Joseph; Marsh, Randall Glenn  
 PATENT ASSIGNEE(S): The Procter & Gamble Company, USA; Arch Chemical  
 SOURCE: PCT Int. Appl., 62 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

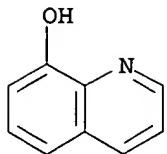
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003088965	A1	20031030	WO 2003-US8476	20030318
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004058855	A1	20040325	US 2003-392104	20030318

PRIORITY APPLN. INFO.: US 2002-374347P P 20020422

AB A method for delivering excess zinc to eukaryotic cells to inhibit the metab. of the cell comprises treating the cells with a zinc ionophoric that is capable of delivering a zinc ion across a cellular membrane wherein the min. inhibitory concn. (MIC) of the zinc ionophoric material is <500 ppm. The invention also relates to methods of treating microbial infections on the skin or scalp, and for the treatment of dandruff. The zinc ionophoric material can be in combination with a zinc-contg. material and there can be an increase in an intracellular zinc level by 1.5-fold more than would occur in the absence of the zinc ionophoric material. Thus, an oil-in-water compn. contained mineral oil 20.0, and Polysorbate 3.0% in the oily phase, ZnO 0.2, zinc pyrithione 1.0, preservative 0.3, perfume 0.2 and water qs top 100%.

IT 148-24-3, 8-Hydroxyquinoline, biological studies  
 RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (materials with zinc ionophoric behavior for treating skin or hair microbial infections and dandruff)

RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2002:521446 HCAPLUS  
 DOCUMENT NUMBER: 137:83429  
 TITLE: Skin care product containing a retinoid and a retinoid booster system in a dual compartment package  
 INVENTOR(S): Granger, Stewart Paton; Pillai, Sreekumar; Scott, Ian Richard  
 PATENT ASSIGNEE(S): Unilever P.L.C., UK; Unilever N.V.; Hindustan Lever Limited  
 SOURCE: PCT Int. Appl., 50 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002053125	A2	20020711	WO 2001-EP14769	20011213
WO 2002053125	A3	20021003		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: US 2000-258460P P 20001228

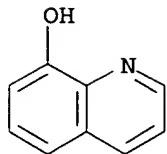
AB A stable skin care product contains a first compn. comprising about 0.001-10% a retinoid, a second compn. comprising 0.0001-50% at least 1 retinoid booster, a first compartment for storing the first compn., and a second compartment for storing the second compn., the first and second compartments being joined together. Thus, a combination of oleoyl hydroxyethylimidazoline and climbazole along with retinol inhibited the expression of transglutaminase.

IT 148-24-3, 8-Hydroxyquinoline, biological studies

RL: COS (Cosmetic use); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (skin care product contg. retinoid and retinoid booster system in dual compartment package)

RN 148-24-3 HCAPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L48 ANSWER 3 OF 9 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2002:521445 HCPLUS  
 DOCUMENT NUMBER: 137:83428  
 TITLE: Stable skin care compositions containing a retinoid and a retinoid booster system  
 INVENTOR(S): Granger, Stewart Paton; Chandar, Prem; Scott, Ian Richard  
 PATENT ASSIGNEE(S): Unilever P.L.C., UK; Unilever N.V.; Hindustan Lever Limited  
 SOURCE: PCT Int. Appl., 49 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002053124	A2	20020711	WO 2001-EP14491	20011206
WO 2002053124	A3	20030522		
WO 2002053124	B1	20040304		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 2003049286	A1	20030313	US 2001-8067	20011105
EP 1349536	A2	20031008	EP 2001-272638	20011206
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			

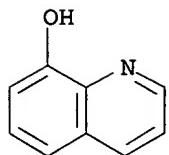
PRIORITY APPLN. INFO.: US 2000-258459P P 20001228  
 WO 2001-EP14491 W 20011206

AB A stable skin care compn. contains 0.0001-50% at least 1 retinoid booster, 0.001-10% a retinoid, and a cosmetically acceptable vehicle, wherein the stable skin care compn. is contained in a package so that the compn. is out of contact with oxygen. A synergistic inhibition of transglutaminase expression by a combination of oleoyl hydroxyethylimidazoline and climbazole with retinol was obsd.

IT 148-24-3, 8-Hydroxyquinoline, biological studies  
 RL: COS (Cosmetic use); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (stable skin care compns. contg. retinoid and retinoid booster system)

RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L48 ANSWER 4 OF 9 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2002:521422 HCPLUS  
 DOCUMENT NUMBER: 137:83423  
 TITLE: Skin care product containing retinoids, retinoid booster and phytoestrogens in a dual compartment package  
 INVENTOR(S): Pillai, Sreekumar; Granger, Stewart Paton; Scott, Ian Richard; Pocalyko, David Joseph  
 PATENT ASSIGNEE(S): Unilever P.L.C., UK; Unilever N.V.; Hindustan Lever Limited  
 SOURCE: PCT Int. Appl., 56 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002053108	A2	20020711	WO 2001-EP14486	20011206
WO 2002053108	A3	20020926		
			W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM	
			RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG	
US 2002143059	A1	20021003	US 2001-3850	20011102
EP 1349538	A2	20031008	EP 2001-990538	20011206
			R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR	
PRIORITY APPLN. INFO.:			US 2000-258457P P 20001228	
			WO 2001-EP14486 W 20011206	

AB A stable skin care product contains a first compn. comprising 0.001-10% a retinoid, a second compn. comprising 0.0001-50% at least 1 retinoid booster and 0.001-10% a phytoestrogen. The products also contain a compartment for storing the first compn. and a second compartment for storing the second compn., the first and second compartments being joined together. Synergy between genistein and daidzein and retinoids was tested. In both the studies genistein was delivered to the cells in a sol. form in DMSO/EtOH. Genistein (1 .mu.m) alone stimulated CRABP-2 significantly. Both genistein and daidzein stimulate retinoid activity in a synergistic manner. All the retinoids tested, except retinyl acetate showed synergy with genistein and daidzein. These data support our claim that the phytoestrogenic flavonoids genistein and daidzein, when supplied to cells in a sol. form, synergistically enhanced the activity of

retinoids.  
IT 148-24-3, 8-Hydroxyquinoline, biological studies  
RL: COS (Cosmetic use); PAC (Pharmacological activity); THU  
(Therapeutic use); BIOL (Biological study); USES (Uses)  
(skin care product contg. retinoid boosters and  
phytoestrogens in dual compartment package)  
RN 148-24-3 HCAPLUS  
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L48 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1999:594841 HCAPLUS  
DOCUMENT NUMBER: 131:219020  
TITLE: Tissue paper having antimicrobial skin lotion  
INVENTOR(S): Klofta, Thomas James; Steinhardt, Mark John  
PATENT ASSIGNEE(S): The Procter & Gamble Company, USA  
SOURCE: PCT Int. Appl., 60 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 9  
PATENT INFORMATION:

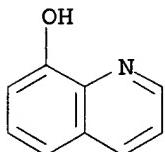
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9945771	A1	19990916	WO 1999-US4221	19990226
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6238682	B1	20010529	US 1998-41231	19980312
CA 2322506	AA	19990916	CA 1999-2322506	19990226
AU 9927929	A1	19990927	AU 1999-27929	19990226
AU 747849	B2	20020523		
BR 9908715	A	20001121	BR 1999-8715	19990226
EP 1061799	A1	20001227	EP 1999-908519	19990226
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
JP 2002505894	T2	20020226	JP 2000-535199	19990226
ZA 9901999	A	19990913	ZA 1999-1999	19990311
PRIORITY APPLN. INFO.:			US 1998-41231 A 19980312	
			US 1993-165767 B1 19931213	
			US 1995-398727 A1 19950306	
			US 1996-658342 A1 19960605	
			WO 1999-US4221 W 19990226	

AB An anhyd. lotion compn. for killing viruses and bacteria in addn. to

imparting a soft, lubricious, lotion-like feel when applied to tissue paper and tissue paper treated with such lotion compns. are disclosed. The antiviral action of the lotion is due to the addn. of an org. acid such as citric acid or salicylic acid. The antibacterial action is due to the addn. of antibacterial agents such as triclosan. The solubilization of the antiviral and antibacterial agents within the lotion matrix is aided by the addn. of hydrophilic solvents and hydrophilic surfactants. The lubricious lotions also contain a plastic or fluid skin conditioning agent such as petrolatum, an optional immobilizing agent such as a fatty alc. or fatty acid to immobilize the skin conditioning agent on the surface of the tissue paper web and a hydrophilic surfactant to improve wettability when applied to toilet tissue. Because less lotion is required to impart the desired soft, lotion-like feel benefits, detrimental effects on the tensile strength and caliper of the lotioned paper are minimized or avoided. The anhyd. nature of the lotions also aids in the maintenance of such phys. properties as tensile and caliper. A lotion contained petrolatum 41.0, cetyl alc. 28.6, cetareth-10 15.2, salicylic acid 10.1, and triclosan 5.1%.

IT 148-24-3, 8-Hydroxyquinoline, biological studies  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (tissue paper having antimicrobial skin lotion)

RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1996:709899 HCAPLUS  
 DOCUMENT NUMBER: 125:317326  
 TITLE: 8-Hydroxyquinoline for treatment of skin diseases caused by Trichophyton  
 INVENTOR(S): Myagawa, Sumyuki; Oonishi, Kyotaka; Soeda, Mahito; Oota, Michitaka  
 PATENT ASSIGNEE(S): Shinnittetsu Kagaku, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08245390	A2	19960924	JP 1995-53036	19950313
PRIORITY APPLN. INFO.:			JP 1995-53036	19950313
AB	The treatment agents contain 8-hydroxyquinoline (I) and/or its metal complexes as active ingredients. I-Cu (at 2.5 .mu.g/mL) totally			

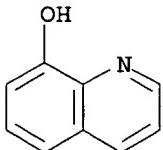
controlled Trichophyton mentagrophytes and T. rubrum, vs. much less effect, for cresol soap.

IT 148-24-3, 8-Hydroxyquinoline, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(hydroxyquinoline for treatment of skin diseases caused by Trichophyton)

RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L48 ANSWER 7 OF 9 HCPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:467374 HCPLUS

DOCUMENT NUMBER: 125:123748

TITLE: Topical preparations to assist skin tear injuries

INVENTOR(S): Mulder, Gerit D.

PATENT ASSIGNEE(S): USA

SOURCE: U.S., 5 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5536502	A	19960716	US 1995-383507	19950203

PRIORITY APPLN. INFO.: US 1995-383507 19950203

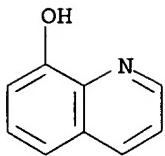
AB A low-sensitizing medicament for use in treating skin-tear injuries includes an emulsified water and hydrocarbon carrier portion, an emollient portion, a hydroxyquinoline antimicrobial portion, a mild keratolytic portion, and a paraben preservative portion. Addnl. ingredients include a zinc oxide topical protectant, vitamin E, a buffer or alkalizing agent that adjusts pH in a range from 6.5 to 6.8, and a scenting agent. For example, a gel balm ointment contained deionized water 27.72, petrolatum 34.90, beeswax 5.84, lanolin oil 15.5, methylparaben 0.25, propylparaben 0.1, 8-hydroxyquinoline 0.75, ZnO 2, Me salicylate 0.25, .alpha.-tocopherol 1, Na borate 0.94, sorbitan sesquioleate 0.25, lanolin wax 0.5, and urea 10 %.

IT 148-24-3, 8-Hydroxyquinoline, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(antimicrobial; topical preps. to promote superficial skin injuries)

RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L48 ANSWER 8 OF 9 HCPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:471904 HCPLUS  
 DOCUMENT NUMBER: 122:222887  
 TITLE: Topical 8-hydroxyquinoline compositions  
 INVENTOR(S): Whitefield, Martin  
 PATENT ASSIGNEE(S): Diomed Developments Ltd., UK  
 SOURCE: Brit. UK Pat. Appl., 15 pp.  
 CODEN: BAXXDU  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2279567	A1	19950111	GB 1994-12606	19940623
GB 2279567	B2	19970402		

PRIORITY APPLN. INFO.: GB 1993-13863 19930705

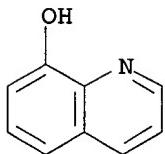
AB Topical compns. for treatment of inflammatory proliferative skin diseases contain 8-hydroxyquinoline, an anhyd. oleophylic, water-immiscible solvent, an antioxidant, a thickener, and if desired betamethasone valerate. A compn. contg. 8-hydroxyquinoline 0.1, iso-Pr myristate 10.0, hydroxypropyl cellulose 3.0, and ethanol up to 100 parts by wt. was prep'd. for psoriasis treatment. Betamethasone valerate may be incorporated in a concn. of 0.1% by wt.

IT 148-24-3, 8-Hydroxyquinoline, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (topical hydroxyquinoline compns. for treatment of skin inflammation)

RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L48 ANSWER 9 OF 9 HCPLUS COPYRIGHT 2004 ACS on STN

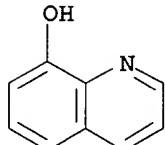
ACCESSION NUMBER: 1995:350939 HCPLUS  
 DOCUMENT NUMBER: 122:114987  
 TITLE: Compositions containing 8-hydroxyquinoline for treatment of hyperproliferative skin diseases.  
 INVENTOR(S): Whitefield, Martin

PATENT ASSIGNEE(S) : Diomed Developments Ltd., UK  
 SOURCE: Eur. Pat. Appl., 7 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 634170	A1	19950118	EP 1994-304561	19940623
EP 634170	B1	19970326		
R: AT, BE, CH, DE, DK, ES, FR, GR, IE, IT, LI, LU, MC, NL, PT, SE AT 150644 ES 2102777 IL 110166 CA 2127218 AU 9466089 AU 674411 US 5817675	E T3 A1 AA A1 B2 A	19970415 19970801 19980816 19950106 19950112 19961219 19981006	AT 1994-304561 ES 1994-304561 IL 1994-110166 CA 1994-2127218 AU 1994-66089 US 1997-863396 GB 1993-13866 US 1994-268440	19940623 19940623 19940629 19940630 19940630 19970527 19930705 19940630

## PRIORITY APPLN. INFO.:

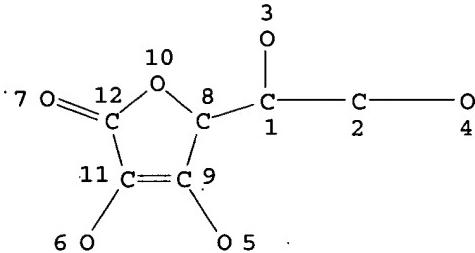
AB 8-Hydroxyquinoline is useful in the topical treatment of inflammatory proliferative skin diseases, esp. psoriasis. It should be applied in an essentially water-immiscible vehicle such as iso-Pr myristate and the compns. may consist of a corticosteroid. Thus, a topical formulation was prep'd. from 8-hydroxyquinoline 0.5, white soft paraffin 40.0, iso-Pr myristate 10.0, cetylstearyl alc. 7.0, Na lauryl sulfate 1.0, phenoxyethanol 0.1, and water to 100.0 parts.  
 IT 148-24-3, 8-Hydroxyquinoline, biological studies  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (topical compns. contg. hydroxyquinoline for treatment of hyperproliferative skin diseases)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



=> d que

L1            1 SEA FILE=REGISTRY ABB=ON PLU=ON 8-HYDROXYQUINOLINE/CN  
 L18        165673 SEA FILE=REGISTRY ABB=ON PLU=ON ZN/ELS  
 L23        1 SEA FILE=REGISTRY ABB=ON PLU=ON IRON/CN  
 L26        1 SEA FILE=REGISTRY ABB=ON PLU=ON COBALT/CN  
 L27        263268 SEA FILE=REGISTRY ABB=ON PLU=ON MO/ELS  
 L29        1 SEA FILE=REGISTRY ABB=ON PLU=ON MANGANESE/CN  
 L31        1 SEA FILE=REGISTRY ABB=ON PLU=ON COPPER/CN  
 L32        2026 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 AND (L23 OR L18 OR L26 OR  
             L27 OR L29 OR L31)  
 L49        1 SEA FILE=REGISTRY ABB=ON PLU=ON PROPYLENE GLYCOL/CN  
 L51        97 SEA FILE=REGISTRY ABB=ON PLU=ON LECITHIN?/CN  
 L52        1 SEA FILE=REGISTRY ABB=ON PLU=ON DIMETHYL SULFOXIDE/CN  
 L53        1 SEA FILE=REGISTRY ABB=ON PLU=ON "NORDIHYDROGUAIARETIC  
             ACID"/CN  
 L55        STR

Claims  
 15, 17, 18, 20, 21,  
 35, 36



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE

L56        1025 SEA FILE=REGISTRY FAM FUL L55  
 L59        102 SEA FILE=HCAPLUS ABB=ON PLU=ON L32 AND (L23 OR L18 OR L26 OR  
             L27 OR L29 OR L31) AND (L49 OR L51 OR L52 OR L53 OR L56)  
 L60        19 SEA FILE=HCAPLUS ABB=ON PLU=ON L59 AND CHELAT?

=> d l60 1b1b ab hitstic 1-19

L60 ANSWER 1 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:536189 HCAPLUS  
 DOCUMENT NUMBER: 139:241609  
 TITLE: The protective effect of free radical scavengers and  
         metal chelators on polyethylene  
         glycol-treated rice leaves  
 AUTHOR(S): Hsu, S. Y.; Kao, C. H.  
 CORPORATE SOURCE: Department of Agronomy, National Taiwan University,  
                   Taipei, Taiwan, 106, Peop. Rep. China  
 SOURCE: Biologia Plantarum (2003), 46(4), 617-619  
 CODEN: BPABAJ; ISSN: 0006-3134  
 PUBLISHER: Institute of Experimental Botany, Academy of Sciences  
                   of the Czech Republic  
 DOCUMENT TYPE: Journal

LANGUAGE: English

AB Effect of free radical scavengers and metal **chelators** on polyethylene glycol (PEG, osmotic potential -1.5 MPa) induced oxidative damage in detached rice leaves was investigated. PEG treatment resulted in a decrease in relative water content and an increase in proline content, and lipid peroxidn. PEG treatment also decreased chlorophyll and protein contents. Free radical scavengers (ascorbate, sodium benzoate, reduced glutathione, and thiourea) retarded and metal **chelators** [2,2'-bipyridine (BP), 8-hydroxyquinoline, and 1,10-phenanthroline] prevented PEG-induced oxidative damage. Furthermore, the protective effect of BP was reversed by adding Fe<sup>2+</sup> and Cu<sup>2+</sup>, but not by Mn<sup>2+</sup> or Zn<sup>2+</sup>. The protective effect of BP is most likely mediated through **chelation** of iron. It seems that oxidative damage induced by PEG may require the participation of iron.

IT 50-81-7, Ascorbic acid, biological studies 148-24-3,  
8-Hydroxyquinoline, biological studies

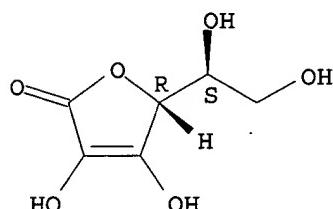
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)

(protective effect of free radical scavengers and metal **chelators** on oxidative damaged rice leaves)

RN 50-81-7 HCPLUS

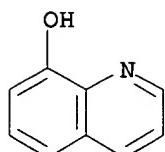
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 7439-89-6, Iron, biological studies 7439-96-5,  
Manganese, biological studies 7440-50-8, Copper, biological  
studies 7440-66-6, Zinc, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(role in induction of chlorophyll and protein loss in rice leaves  
caused by oxidative damage; protective effect of free radical  
scavengers and metal **chelators** on oxidative damaged rice  
leaves)

RN 7439-89-6 HCPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7439-96-5 HCAPLUS  
 CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS  
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2003:295276 HCAPLUS  
 DOCUMENT NUMBER: 138:312623  
 TITLE: Post clean treatment of metal or dielectric surfaces in the manufacture of wafers  
 INVENTOR(S): Small, Robert J.  
 PATENT ASSIGNEE(S): EKC Technology, Inc., USA  
 SOURCE: U.S., 20 pp., Cont.-in-part of U.S. 6,156,661.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 14  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6546939	B1	20030415	US 2000-704688	20001103
US 5279771	A	19940118	US 1990-610044	19901105
US 5334332	A	19940802	US 1992-911102	19920709
US 5981454	A	19991109	US 1997-801911	19970214
US 5911835	A	19990615	US 1997-826257	19970327
US 6156661	A	20001205	US 1999-384946	19990827
PRIORITY APPLN. INFO.:			US 1990-610044	A2 19901105
			US 1992-911102	A2 19920709
			US 1993-78657	B3 19930621
			US 1995-443265	B1 19950517
			US 1997-801911	A3 19970214
			US 1997-826257	A2 19970327
			US 1999-384946	A2 19990827

OTHER SOURCE(S): MARPAT 138:312623  
 AB A compn. for removal of chem. residues from metal or dielec. surfaces or for chem. mech. polishing of a copper or aluminum surface is an aq. soln.

with a pH between about 3.5 and about 7. The compn. contains a monofunctional, difunctional or trifunctional org. acid and a buffering amt. of a quaternary amine, ammonium hydroxide, hydroxylamine, hydroxylamine salt, hydrazine or hydrazine salt base. A method in accordance with the invention for removal of chem. residues from a metal or dielec. surface comprises contacting the metal or dielec. surface with the above compn. for a time sufficient to remove the chem. residues. A method in accordance with the invention for chem. mech. polishing of a copper or aluminum surface comprises applying the above compn. to the copper or aluminum surface, and polishing the surface in the presence of the compn.

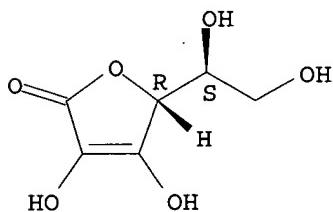
IT 50-81-7, Ascorbic acid, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(amine compd.-buffered org. acids for post clean treatment of metal or dielec. surfaces in manuf. of wafers)

RN 50-81-7 HCPLUS

CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

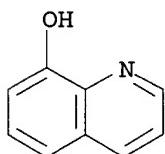


IT 148-24-3, 8-Hydroxyquinoline, uses

RL: MOA (Modifier or additive use); USES (Uses)  
(chelating agent; amine compd.-buffered org. acids for post clean treatment of metal or dielec. surfaces in manuf. of wafers)

RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 7440-50-8, Copper, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(wafer blanket; amine compd.-buffered org. acids for post clean treatment of metal or dielec. surfaces in manuf. of wafers)

RN 7440-50-8 HCPLUS

CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

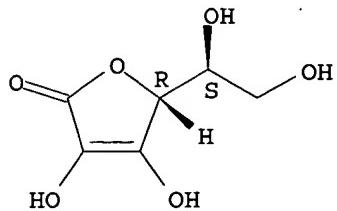
REFERENCE COUNT: 73 THERE ARE 73 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2001:300515 HCAPLUS  
 DOCUMENT NUMBER: 134:300833  
 TITLE: Compositions containing pyroglutamic acid for prevention and treatment of cold and influenza-like symptoms and their methods of use  
 INVENTOR(S): Rennie, Paul John; King, Simon Phillip; Biedermann, Kimberly Ann; Morgan, Jeffrey Michael  
 PATENT ASSIGNEE(S): The Procter & Gamble Company, USA  
 SOURCE: PCT Int. Appl., 15 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 25  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001028556	A2	20010426	WO 2000-US28856	20001019
WO 2001028556	A3	20011011		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1242073	A2	20020925	EP 2000-973658	20001019
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003512325	T2	20030402	JP 2001-531386	20001019
NO 2002001830	A	20020418	NO 2002-1830	20020418
PRIORITY APPLN. INFO.:			US 1999-421131 A	19991019
			WO 2000-US28856 W	20001019

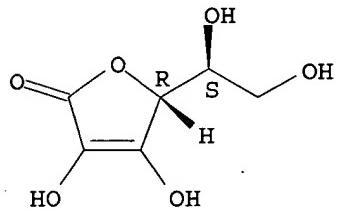
- AB Nasal compns. for prevention and treatment of cold and influenza-like symptoms due to respiratory tract viral infections based on pyroglutamic acid (0.01-20%) and an org. acid having a dissociation const. (pKa) of 3.0-5.0 are described. These compds. and their method of application are effective in both preventing the onset of the symptoms of colds and influenza or significantly mitigating them if already afflicted with such symptoms. A nasal spray compn. was prep'd. contg. (by wt.) pyroglutamic acid 1.00%, ascorbic acid 1.00%, phytic acid as a chelating agent 1.00%, a mucoadhesive polymer (Carbopol 980) 1.00%, eucalyptol 0.01%, Ph Et alc. 0.50%, and water up to 100%, resp. The pH was adjusted to 3.5 with addn. of NaOH. A recommended dosage was 100 .mu.L of the soln. into each nostril three times a day.
- IT 50-81-7, Ascorbic acid, biological studies 50-81-7D, Ascorbic acid, salts 557-34-6, Zinc acetate
- RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
- (compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)
- RN 50-81-7 HCAPLUS
- CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

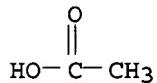


RN 50-81-7 HCAPLUS  
 CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

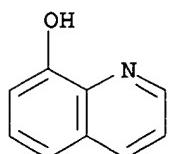


RN 557-34-6 HCAPLUS  
 CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

IT 148-24-3, 8-Hydroxyquinoline, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (compns. contg. pyroglutamic and other org. acids for prevention and  
 treatment of cold and influenza)  
 RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



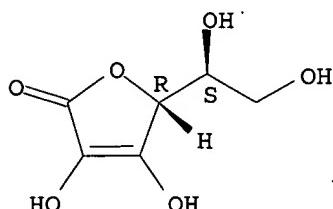
L60 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1999:784331 HCAPLUS

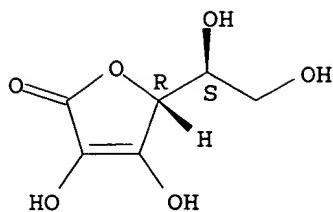
DOCUMENT NUMBER: 132:20747  
 TITLE: Surface regeneration of biosensors using a combination of solutions based on interaction-specific optimized processes  
 INVENTOR(S): Andersson, Karl; Hamalainen, Markku; Malmqvist, Magnus; Roos, Hakan  
 PATENT ASSIGNEE(S): Biacore AB, Swed.  
 SOURCE: PCT Int. Appl., 133 pp.  
 CODEN: PIIXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9963333	A1	19991209	WO 1999-SE921	19990531
W: AU, JP, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6289286	B1	20010911	US 1998-87402	19980529
AU 9946658	A1	19991220	AU 1999-46658	19990531
AU 755181	B2	20021205		
EP 1082607	A1	20010314	EP 1999-930044	19990531
R: BE, CH, DE, FR, GB, LI, NL, SE, FI JP 2002517720	T2	20020618	JP 2000-552490	19990531
PRIORITY APPLN. INFO.:			US 1998-87402	A 19980529
			WO 1999-SE921	W 19990531

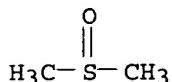
- AB Surface regeneration of affinity biosensors and characterization of biomols. assocd. therewith by multivariate technique employing cocktails of regeneration agents to optimize regeneration of biosensor surface and/or characterize biomols. assocd. therewith. Kits and stock solns. for use in the context of this invention, as well as assocd. computer algorithms are also disclosed. Stock solns. of regeneration cocktails are prep'd. and combined. Solns. are acidic, basic, ionic, org., detergent and chelating agent contg. Biosensors for various affinity bindings are regenerated by the method; the affinity reactions are used for optimizing the regeneration process. Immuno-reactions, nucleic acid hybridization, avidin/streptavidin-biotin, hormone-hormone receptor interactions are performed with Biocore instruments and CM5 sensor chips.
- IT 50-81-7, L-Ascorbic acid, uses 67-68-5,  
Dimethylsulfoxide, uses 148-24-3, 8-Hydroxy quinoline, uses 20427-58-1, Zinc hydroxide  
RL: NUU (Other use, unclassified); USES (Uses)  
(surface regeneration of biosensors using a combination of solns. based on interaction-specific optimized processes)
- RN 50-81-7 HCPLUS  
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

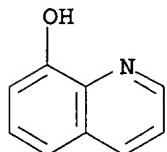




RN 67-68-5 HCAPLUS  
 CN Methane, sulfinylbis- (9CI) (CA INDEX NAME)



RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 20427-58-1 HCAPLUS  
 CN Zinc hydroxide (Zn(OH)2) (9CI) (CA INDEX NAME)

HO-Zn-OH

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1999:718955 HCAPLUS  
 DOCUMENT NUMBER: 131:331072  
 TITLE: Composition for removing chemical residues from metal or dielectric surfaces in semiconductor device fabrication  
 INVENTOR(S): Small, Robert J.  
 PATENT ASSIGNEE(S): EKC Technology, Inc., USA  
 SOURCE: U.S., 16 pp., Cont.-in-part of U.S. 826,257.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 14  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5981454	A	19991109	US 1997-801911	19970214

US 5911835	A	19990615	US 1997-826257	19970327
TW 396202	B	20000701	TW 1998-87101918	19980212
WO 9836045	A1	19980820	WO 1998-US2794	19980214
W: CN, ID, JP, KR, SG				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 909311	A1	19990421	EP 1998-906398	19980214
EP 909311	B1	20030709		
R: AT, BE, CH, DE, DK, FR, GB, IT, LI, LU, IE, FI				
JP 2001500922	T2	20010123	JP 1998-535936	19980214
AT 244751	E	20030715	AT 1998-906398	19980214
US 6156661	A	20001205	US 1999-384946	19990827
US 6546939	B1	20030415	US 2000-704688	20001103
PRIORITY APPLN. INFO.:				
US 1993-78657 A3 19930621				
US 1995-443265 B1 19950517				
US 1997-826257 A2 19970327				
US 1990-610044 A2 19901105				
US 1992-911102 A2 19920709				
US 1997-801911 A 19970214				
WO 1998-US2794 W 19980214				
US 1999-384946 A2 19990827				

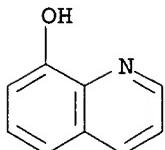
AB A compn. for removal of chem. residues from metal or dielec. surfaces or for chem. mech. polishing of a Cu surface is an aq. soln. with a pH between .apprx.3.5 and .apprx.7. The compn. contains a monofunctional, difunctional, or trifunctional org. acid and a buffering amt. of a quaternary amine, NH4OH, hydroxylamine, hydroxylamine salt, hydrazine, or hydrazine salt base. A method for removal of chem. residues from a metal or dielec. surface comprises contacting the metal or dielec. surface with the above compn. for a time sufficient to remove the chem. residues. A method for chem. mech. polishing of a Cu surface comprises applying the above compn. to the Cu surface, and polishing the surface in the presence of the compn.

IT 148-24-3, 8-Hydroxyquinoline, processes

RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (chelating agent; compn. for removing chem. residues from metal or dielec. surfaces and for chem.-mech. polishing of copper in semiconductor device fabrication contg.)

RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 7440-50-8, Copper, processes

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)  
 (compn. for chem.-mech. polishing of copper in semiconductor device fabrication)

RN 7440-50-8 HCPLUS

CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

Cu

IT 50-81-7, Ascorbic acid, processes

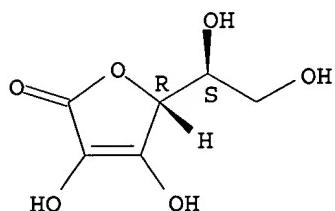
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(compn. for removing chem. residues from metal or dielec. surfaces and for chem.-mech. polishing of copper in semiconductor device fabrication contg.)

RN 50-81-7 HCAPLUS

CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:511033 HCAPLUS

DOCUMENT NUMBER: 131:139492

TITLE: Chelated 8-hydroxyquinoline for the treatment of epithelial lesions

INVENTOR(S): Jordan, Russel T.; Hanson, Carl C.; Potestio, Frank S.

PATENT ASSIGNEE(S): Dermex Pharmaceuticals, LLC, USA

SOURCE: PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9939721	A1	19990812	WO 1999-US2817	19990210
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2320628	AA	19990812	CA 1999-2320628	19990210
AU 9925956	A1	19990823	AU 1999-25956	19990210
AU 755521	B2	20021212		
EP 1052999	A1	20001122	EP 1999-905911	19990210
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, FI

NZ 506367	A	20030328	NZ 1999-506367	19990210
US 6476014	B1	20021105	US 2001-601304	20010102
US 2003113381	A1	20030619	US 2002-247161	20020918
US 2003114484	A1	20030619	US 2002-247526	20020918

PRIORITY APPLN. INFO.: US 1998-21421 A2 19980210  
                           WO 1999-US2817 W 19990210  
                           US 2001-601304 A3 20010102

AB Oxinates including 8-hydroxyquinoline and a heavy metal are topically applied to epidermal lesions for therapeutic effect. The therapeutic compn. demonstrates selective toxicity with a therapeutic index of 100% on human lung cancer, breast cancer, melanoma, venereal warts, male veruoca warts, lesions produced by human papilloma virus, basal cell carcinoma, solar keratosis, and Kaposi's sarcoma. In veterinary applications where dogs, cats, and horses are the patients, the compn. shows a 100% therapeutic index with selective toxicity against eye cancer, sarcoids, sarcoma, malignant melanoma, rectal adenoma, histiocytoma, and sebaceous adenoma.

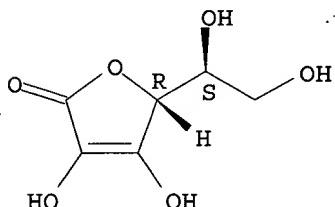
IT 50-81-7, L-Ascorbic acid, biological studies 50-81-7D,  
       Ascorbic acid, derivs. 500-38-9 500-38-9D, derivs.

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
       (antioxidant; chelated hydroxyquinoline for treatment of  
       epithelial lesions)

RN 50-81-7 HCPLUS

CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

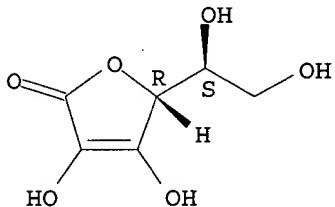
Absolute stereochemistry.



RN 50-81-7 HCPLUS

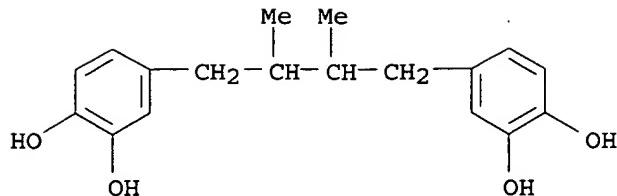
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



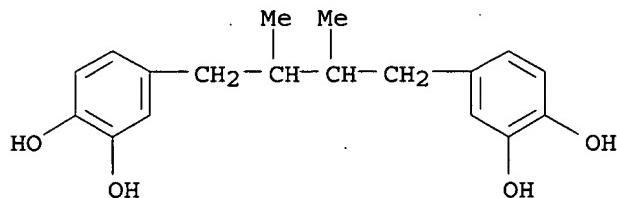
RN 500-38-9 HCPLUS

CN 1,2-Benzenediol, 4,4'-(2,3-dimethyl-1,4-butanediyl)bis- (9CI) (CA INDEX NAME)



RN 500-38-9 HCPLUS'

CN 1,2-Benzenediol, 4,4'-(2,3-dimethyl-1,4-butanediyl)bis- (9CI) (CA INDEX NAME)



IT 57-55-6D, Propylene glycol, polyoxyalkylene ether derivs.

148-24-3D, 8-Hydroxyquinoline, chelates

7439-89-6D, Iron, chelates with 8-hydroxyquinoline, biological studies

7439-96-5D, Manganese, chelates with 8-hydroxyquinoline, biological studies

7439-98-7D, Molybdenum, chelates with 8-hydroxyquinoline, biological studies

7440-48-4D, Cobalt, chelates with 8-hydroxyquinoline,

biological studies 7440-50-8D, Copper, chelates with 8-hydroxyquinoline, biological studies 13978-85-3, Zinc

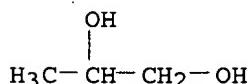
8-hydroxyquinolinate

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(chelated hydroxyquinoline for treatment of epithelial lesions)

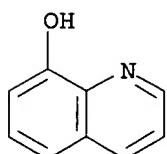
RN 57-55-6 HCPLUS

CN 1,2-Propanediol (8CI, 9CI) (CA INDEX NAME)



RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7439-89-6 HCAPLUS  
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

## Fe

RN 7439-96-5 HCAPLUS  
 CN Manganese (8CI, 9CI) (CA INDEX NAME)

## Mn

RN 7439-98-7 HCAPLUS  
 CN Molybdenum (8CI, 9CI) (CA INDEX NAME)

## Mo

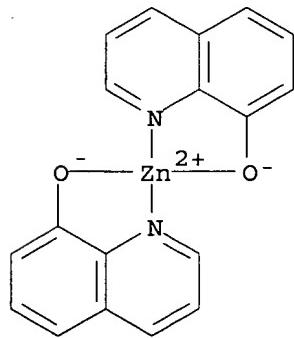
RN 7440-48-4 HCAPLUS  
 CN Cobalt (8CI, 9CI) (CA INDEX NAME)

## Co

RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

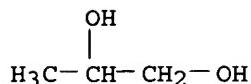
## Cu

RN 13978-85-3 HCAPLUS  
 CN Zinc, bis(8-quinolinolato-.kappa.N1,.kappa.O8)-, (T-4)- (9CI) (CA INDEX NAME)



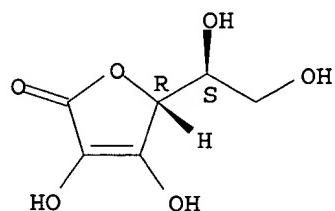
IT 57-55-6, 1,2-Propanediol, biological studies 134-03-2,  
 Sodium ascorbate 4468-02-4, Zinc gluconate  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (chelated hydroxyquinoline for treatment of epithelial  
 lesions)

RN 57-55-6 HCPLUS  
 CN 1,2-Propanediol (8CI, 9CI) (CA INDEX NAME)



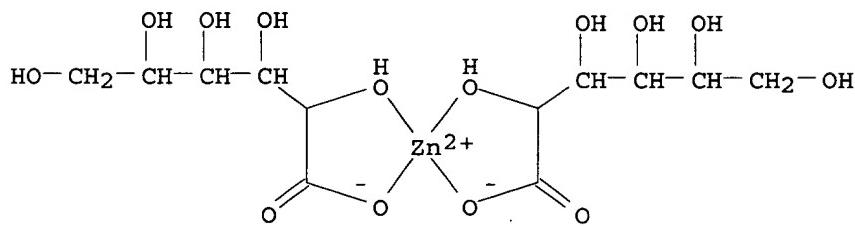
RN 134-03-2 HCPLUS  
 CN L-Ascorbic acid, monosodium salt (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

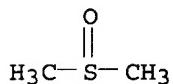


● Na

RN 4468-02-4 HCPLUS  
 CN Zinc, bis(D-gluconato-.kappa.O1,.kappa.O2)-, (T-4)- (9CI) (CA INDEX NAME)

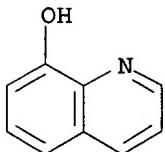


IT 67-68-5, Dimethyl sulfoxide, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (penetrant; **chelated** hydroxyquinoline for treatment of  
 epithelial lesions)  
 RN 67-68-5 HCPLUS  
 CN Methane, sulfinylbis- (9CI) (CA INDEX NAME)



IT 148-24-3, 8-Hydroxyquinoline, reactions 7646-85-7, Zinc  
 chloride, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction; **chelated** hydroxyquinoline for treatment of

epithelial lesions)  
RN 148-24-3 HCAPLUS  
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7646-85-7 HCAPLUS  
CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1998:197363 HCAPLUS  
DOCUMENT NUMBER: 128:262004  
TITLE: Hydrogen peroxide disinfecting and sterilizing compositions  
INVENTOR(S): Scoville, John R., Jr.; Novicova, Inna A.  
PATENT ASSIGNEE(S): Cottrell, Ltd., USA  
SOURCE: PCT Int. Appl., 24 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

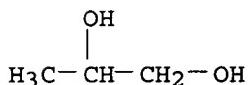
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9811777	A1	19980326	WO 1997-US16421	19970917
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9744195	A1	19980414	AU 1997-44195	19970917
EP 957683	A1	19991124	EP 1997-942512	19970917
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001506971	T2	20010529	JP 1998-514826	19970917
BR 9712070	A	20020115	BR 1997-12070	19970917
US 5900256	A	19990504	US 1998-24881	19980217
PRIORITY APPLN. INFO.:			US 1996-715337	A 19960918
			WO 1997-US16421	W 19970917
AB An aq. acidic disinfecting and sterilizing compn. for medical instruments, which may include brass, copper, aluminum, stainless steel, plastic and				

ceramic components. The compn. contains hydrogen peroxide, peracetic acid, a corrosion inhibitor system, a surfactant and a stabilizer. These compns. have in use stability and are effective as a disinfectant and/or sterilant either at room or when heated. For other applications, surfactants, sequestering agents and stabilizers may be optional. A compn. was prep'd. contg. H<sub>2</sub>O<sub>2</sub> 7.3, peracetic acid 0.23, 1-hydroxyethylidene-1,1-diphosphonic acid 0.70, 8-hydroxyquinoline 0.0035, propylene glycol 4.10, nonylphenol surfactant 0.002, 1,2,3-benzotriazole 1.00, Na nitrite 0.25, Na molybdate 0.25% by wt. and deionized water to 100%.

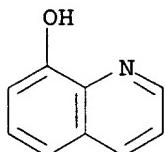
IT 57-55-6, Propylene glycol, biological studies 148-24-3,  
8-Quinolinol, biological studies 7631-95-0, Sodium molybdate  
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(hydrogen peroxide disinfecting and sterilizing compns.)

RN 57-55-6 HCPLUS

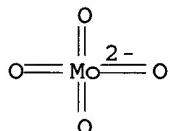
CN 1,2-Propanediol (8CI, 9CI) (CA INDEX NAME)



RN 148-24-3 HCPLUS  
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7631-95-0 HCPLUS  
CN Molybdate (MoO<sub>4</sub><sup>2-</sup>), disodium, (T-4)- (9CI) (CA INDEX NAME)



● 2 Na<sup>+</sup>

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 8 OF 19 HCPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1996:212832 HCPLUS  
DOCUMENT NUMBER: 124:282863  
TITLE: The environment of the lipoxygenase iron binding site explored with novel hydroxypyridinone iron

**chelators**

AUTHOR(S) : Abeysinghe, Rajewa D.; Roberts, Pamela J.; Cooper, Chris E.; MacLean, Kirsteen H.; Hider, Robert C.; Porter, John B.

CORPORATE SOURCE: Dep. Clinical Hematol., Univ. Coll. London Med. Sch., London, WC1E 6HX, UK

SOURCE: Journal of Biological Chemistry (1996), 271(14), 7965-72

CODEN: JBCHA3; ISSN: 0021-9258

PUBLISHER: American Society for Biochemistry and Molecular Biology

DOCUMENT TYPE: Journal

LANGUAGE: English

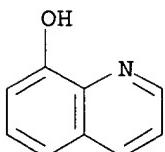
**AB** The mechanisms of lipoxygenase inhibition by iron **chelators** have been investigated in human neutrophils and in isolated soybean lipoxygenase. Their Fe(III)-contg. active sites have been targeted by synthesizing novel bidentate **chelators** from the hydroxypyridinone family sufficiently small to gain access through the hydrophobic channels of lipoxygenase. In stimulated human neutrophils, release of [3H]arachidonate-labeled eicosanoids is dependent on the lipid solv. of hydroxypyridinones, but larger hexadentate **chelators** have no effect on this or on total cellular leukotriene B4 prodn. Lipophilic hydroxypyridinones inhibit 5-lipoxygenase at equiv. concns. to the established inhibitor, piroprost, and show addnl. but minor anti-phospholipase A2 activity. Soybean 15-lipoxygenase inhibition is also dependent on the lipid solv. and coordination structure of **chelators**. Inhibition is assocd. with the formation of **chelate-iron** complexes, which are removed by dialysis without restoration of enzyme activity. Only after adding back iron is activity restored. ESR studies show the removal of the iron center signal ( $g = 6$ ) is concomitant with formation of Fe(III)-**chelator** complexes, identical in spectral shape and g value to 3:1 hydroxypyridinone Fe(III) complexes. Removal of iron is not the only mechanism by which hydroxypyridinones can inhibit lipoxygenase in intact cells, however, as a lipophilic non-iron-binding hydroxypyridinone, which shows no inhibition of the soybean lipoxygenase activity, partially inhibits 5-lipoxygenase in intact neutrophils without inhibiting neutrophil phospholipase A2.

IT 148-24-3, Oxine, biological studies 7439-89-6, Iron, biological studies 9001-84-7, Phospholipase A2  
 RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(mechanism inhibition of arachidonate lipoxygenase by novel hydroxypyridinone iron **chelators** in vitro and in neutrophils)

RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7439-89-6 HCPLUS  
 CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 9001-84-7 HCAPLUS  
 CN Phospholipase A2 (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L60 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1995:568995 HCAPLUS  
 DOCUMENT NUMBER: 123:137169  
 TITLE: Tetrahydropterin Reactions of Dioxo-Molybdenum(6+)  
 Complexes: Does Redox Occur?  
 AUTHOR(S): Burgmayer, Sharon J. Nieter; Arkin, Michelle R.;  
 Bostick, Laura; Dempster, Sara; Everett, Kristin M.;  
 Layton, Heather L.; Paul, Kateri E.; Rogge, Cory;  
 Rheingold, Arnold L.  
 CORPORATE SOURCE: Department of Chemistry, Bryn Mawr College, Bryn Mawr,  
 PA, 19010, USA  
 SOURCE: Journal of the American Chemical Society (1995),  
 117(21), 5812-23  
 CODEN: JACSAT; ISSN: 0002-7863  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB This report describes our continued investigation of reactions between tetrahydropterins and dioxo-molybdenum complexes. We report the results of structural, reactivity, and theor. expts. that indicate these reduced molybdenum-pterin complexes are better described as Mo(6+)-H4pterin rather than Mo(4+)-H2pterin as previously assigned. Both Mulliken charges calcd. using the extended Huckel MO method and the bond valence sum method predict a formal molybdenum oxidn. state midway between 5+ and 6+. The complexes Mo2O4Cl2(tetrahydro-6,7-dimethylpterin)2, MoOC13(tetrahydro-6,7-dimethylpterin), and MoOC12(tetrahydro-6-(hydroxymethyl)pterin) (diethyldit hiocarbamate) have been characterized by 1H NMR, IR, UV/vis., and cond. measurements. The x-ray crystal structure is reported for Mo2O4Cl2(tetrahydro-6,7-dimethylpterin)2.cntdot.4DMF. Inner coordination sphere bond distances indicate substantial electron d. is donated from the pterin N(5) to Mo. These complexes undergo solvation and ligand substitution reactions. It is shown that solvation is assocd. with acid-base reactions at the tetrahydropterin ligands. The molybdenum-tetrahydropterin complexes show a variety of reactivities toward the oxidants O2, 2,6-dichloroindophenol, and DMSO. This study shows that tetrahydropterin has a high affinity to chelate Mo(6+) if one of the two oxo ligands is removed and that coordination to molybdenum stabilizes tetrahydropterins toward oxidn. Results from this study also suggest that dioxo-Mo(VI) coordination to tetrahydropterin is unlikely.

IT 16065-87-5, Molybdenum(6+), biological studies  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)  
 (synthesis and redox reactions of tetrahydropterin dioxo-molybdenum(6+)  
 complexes as models for molybdoenzyme MoCo)

RN 16065-87-5 HCAPLUS  
 CN Molybdenum, ion (Mo6+) (8CI, 9CI) (CA INDEX NAME)

Mo<sup>6+</sup>

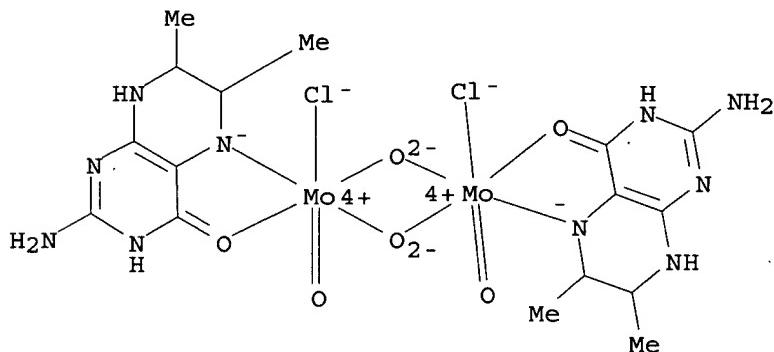
Mo<sup>6+</sup>

IT 7439-98-7DP, Molybdenum, dioxo, complexes with tetrahydropterin  
 166331-14-2P 166331-15-3P 166331-16-4P  
 166331-17-5P 166331-18-6P  
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (synthesis and redox reactions of tetrahydropterin dioxo-molybdenum(6+)  
 complexes as models for molybdoenzyme MoCo)

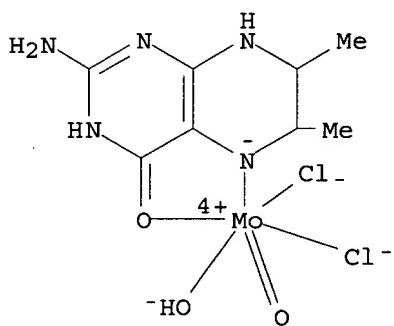
RN 7439-98-7 HCAPLUS  
 CN Molybdenum (8CI, 9CI) (CA INDEX NAME)

## Mo

RN 166331-14-2 HCAPLUS  
 CN Molybdenum, bis(2-amino-5,6,7,8-tetrahydro-6,7-dimethyl-4(1H)-  
 pteridinonato-N5,O4)dichlorodi-.mu.-oxodioxodi-, stereoisomer (9CI) (CA  
 INDEX NAME)

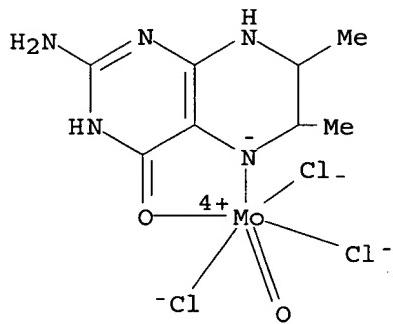


RN 166331-15-3 HCAPLUS  
 CN Molybdenum, (2-amino-5,6,7,8-tetrahydro-6,7-dimethyl-4(1H)-pteridinonato-  
 N5,O4)dichlorohydroxyoxo-, [OC-6-14-(cis)]- (9CI) (CA INDEX NAME)



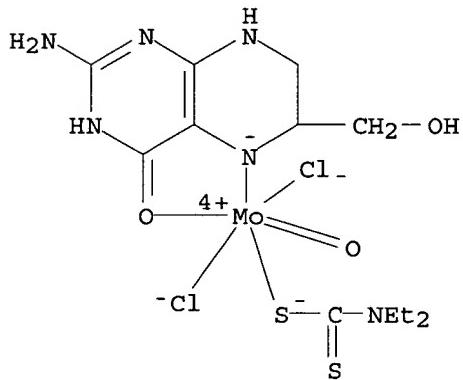
RN 166331-16-4 HCAPLUS  
 CN Molybdenum, [rel-(6R,7S)-2-amino-5,6,7,8-tetrahydro-6,7-dimethyl-4(1H)-

pteridinonato-.kappa.N5,.kappa.O4]trichlorooxo-, (OC-6-41)- (9CI) (CA INDEX NAME)



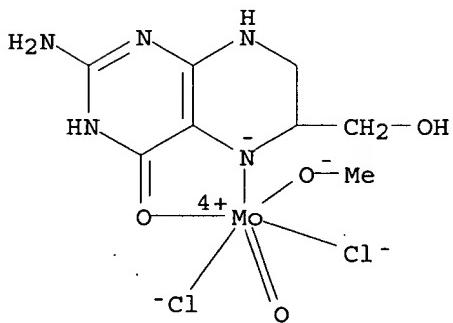
RN 166331-17-5 HCPLUS

CN Molybdenum, [2-amino-5,6,7,8-tetrahydro-6-(hydroxymethyl)-4(1H)-pteridinonato-N5,O4]dichloro(diethylcarbamodithioato-S)oxo- (9CI) (CA INDEX NAME)



RN 166331-18-6 HCPLUS

CN Molybdenum, [2-amino-5,6,7,8-tetrahydro-6-(hydroxymethyl)-4(1H)-pteridinonato-N5,O4]dichloromethoxyoxo- (9CI) (CA INDEX NAME)



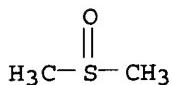
IT 67-68-5, reactions 148-24-3, 8-Hydroxyquinoline,  
reactions 13637-68-8 17524-05-9 19680-83-2

**75780-89-1**

RL: RCT (Reactant); RACT (Reactant or reagent)  
(synthesis and redox reactions of tetrahydropterin dioxo-molybdenum(6+)  
complexes as models for molybdoenzyme MoCo)

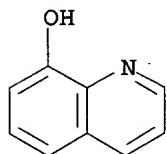
RN 67-68-5 HCPLUS

CN Methane, sulfinylbis- (9CI) (CA INDEX NAME)



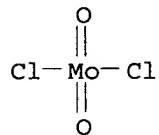
RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



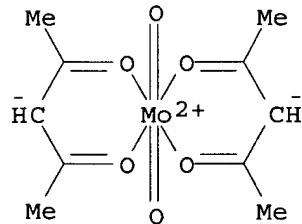
RN 13637-68-8 HCPLUS

CN Molybdenum chloride oxide ( $\text{MoCl}_2\text{O}_2$ ), (T-4)- (9CI) (CA INDEX NAME)



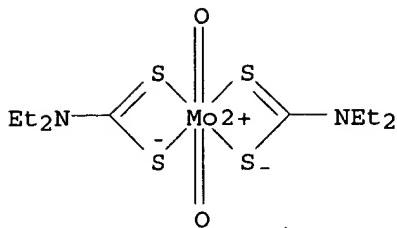
RN 17524-05-9 HCPLUS

CN Molybdenum, dioxobis(2,4-pentanedionato-.kappa.O,.kappa.O')-, (OC-6-21)- (9CI) (CA INDEX NAME)



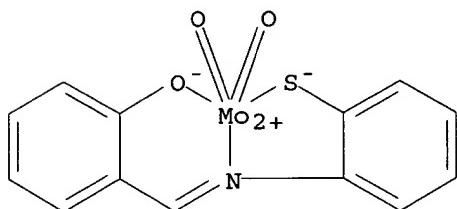
RN 19680-83-2 HCPLUS

CN Molybdenum, bis(diethylcarbamodithioato-.kappa.S,.kappa.S')dioxo-, (OC-6-21)- (9CI) (CA INDEX NAME)



RN 75780-89-1 HCPLUS

CN Molybdenum, [2-[1-[[2-(mercapto-.kappa.S)phenyl]imino-.kappa.N]ethyl]phenolato(2-)-.kappa.O]dioxo-, (SP-5-32)- (9CI) (CA INDEX NAME)



L60 ANSWER 10 OF 19 HCPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1985:464009 HCPLUS

DOCUMENT NUMBER: 103:64009

TITLE: Behavior of extracts of thallium, indium, beryllium, and molybdenum **chelates** in a graphite furnace during atomic absorption analysis

AUTHOR(S): Samchuk, A. I.

CORPORATE SOURCE: Inst. Geokhim. Fiz. Miner., Kiev, USSR

SOURCE: Ukrainskii Khimicheskii Zhurnal (Russian Edition)  
(1985), 51(3), 287-91

CODEN: UKZHAU; ISSN: 0041-6045

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The at. absorption signal is a function of several parameters, such as the **chelating** agent, solvent, thermal treatment temp., and spectral buffer. The highest and lowest signals were obsd. for exts. in C6H6 and CC14, resp. Ascorbic acid is the best spectral buffer.

IT 7439-98-7, analysis

RL: ANT (Analyte); ANST (Analytical study)  
(detn. of, by extn. and furnace at. absorption, **chelate** behavior in)

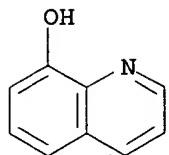
RN 7439-98-7 HCPLUS

CN Molybdenum (8CI, 9CI) (CA INDEX NAME)

Mo

IT 148-24-3D, **chelates** 7439-98-7D,  
**chelates**RL: ANST (Analytical study)  
(exts. of, in furnace at. absorption anal.)

RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)

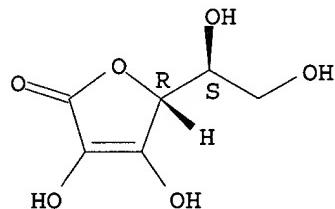


RN 7439-98-7 HCPLUS  
 CN Molybdenum (8CI, 9CI) (CA INDEX NAME)

Mo

IT 50-81-7, uses and miscellaneous  
 RL: USES (Uses)  
 (in furnace at. absorption anal. of metal chelate exts.)  
 RN 50-81-7 HCPLUS  
 CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L60 ANSWER 11 OF 19 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1985:167381 HCPLUS  
 DOCUMENT NUMBER: 102:167381  
 TITLE: Preventing deposition of polymer scale and a coating agent therefor  
 INVENTOR(S): Shimizu, Toshihide; Kaneko, Ichiro; Shimakura, Yoshiteru  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd. , Japan  
 SOURCE: Eur. Pat. Appl., 39 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 126991	A1	19841205	EP 1984-104755	19840427
R: BE, DE, FR, GB, IT, NL				
JP 59202201	A2	19841116	JP 1983-75557	19830428
JP 63056882	B4	19881109		

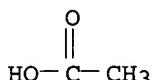
US 4539230 A 19850903 US 1984-601052 19840416  
 PRIORITY APPLN. INFO.: JP 1983-75557 19830428  
 AB Polymer scale buildup on reactor walls in the emulsion polymn. of ethylenically unsatd. monomers is prevented by coating the walls with a compn. consisting of an org. compd. having  $\geq 5$  conjugated  $\pi$ . bonds, a chelating agent, a metal compd. capable of producing metal ions having coordination no.  $\geq 2$ , and optionally a silicic compd., dissolved or dispersed in a solvent, and drying the coating. Thus, a 0.5% coating compn. consisting of 60 parts C.I. Solvent Black 7 [8005-02-5], 25 parts o-phenanthroline [66-71-7], and 15 parts FeCl<sub>2</sub> in a 80:20 water-MeOH mixt. was coated on a stainless steel polymn. reactor and dried 30 min at 50.degree.. A mixt. of 40 kg water, 10 kg butadiene, 10 kg styrene, 400 g acrylic acid, 600 g Na lauryl sulfate, 500 g tert-dodecyl mercaptan, and 100 g K<sub>2</sub>S<sub>2</sub>O<sub>8</sub> was agitated 8 h at 60.degree. to give a polymer [25085-39-6] slurry which left no scale deposition on the reactor wall, compared with 1200 g/m<sup>2</sup> for a similar polymn. in an uncoated reactor.

IT 557-34-6 7646-85-7, uses and miscellaneous

RL: USES (Uses)  
 (coatings, contg. chelating agents and  $\pi$ . bond-contg. compds., for scale prevention in emulsion polymn. of unsatd. compds.)

RN 557-34-6 HCPLUS

CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



● 1/2 Zn

RN 7646-85-7 HCPLUS

CN Zinc chloride (ZnCl<sub>2</sub>) (9CI) (CA INDEX NAME)

Cl-Zn-Cl

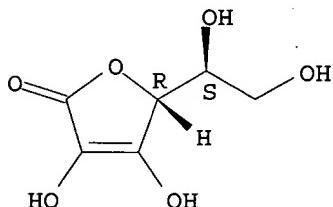
IT 50-81-7, uses and miscellaneous 148-24-3, uses and miscellaneous

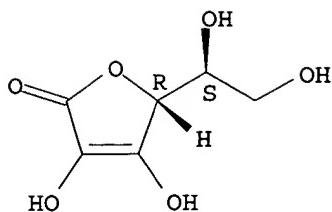
RL: USES (Uses)  
 (coatings, contg.  $\pi$ . bond-contg. compds. and metal compds., for scale prevention in emulsion polymn. of unsatd. compds.)

RN 50-81-7 HCPLUS

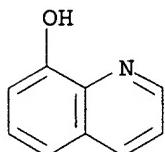
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.





RN 148-24-3 HCAPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L60 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1983:220196 HCAPLUS  
 DOCUMENT NUMBER: 98:220196  
 TITLE: Additives in electroless copper coating. I  
 AUTHOR(S): Lu, Wuchen  
 CORPORATE SOURCE: Inst. Surface Technol., Northeast. Inst. Technol., Shenyang, Peop. Rep. China  
 SOURCE: Dongbei Gongxueyuan Xuebao (1982), 33, 29-51  
 CODEN: THYPDK; ISSN: 0253-4258  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese  
 AB The effects of additives applied to electroless Cu coating, i. e., compds. of different radicals contg. S, O, or N, were investigated. The exptl. results of different addn. agents, the stabilities of coating solns., deposition rates, and thickness of the Cu film were studied. Adding S- or N-contg. radical compds. in coating solns. gave better stability for the soln. Some complexes and chelates were formed by these addn. agents with Cu ions. Expts. for evaluating the stabilities of the coating solns. in which S- and N-contg. radical compds. were added together were performed with detn. of their deposition rates. The optimal amt. of addn. agents added in plating soln. was discussed in relation to such parameters as the temp. of the coating soln., coating time, and thickness of the Cu film.  
 IT 7440-50-8, uses and miscellaneous  
 RL: USES (Uses)  
 (coating with, additives in electroless)  
 RN 7440-50-8 HCAPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

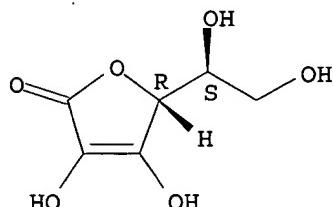
IT 50-81-7, uses and miscellaneous 148-24-3, uses and miscellaneous  
 RL: USES (Uses)

(copper electroless coating soln. contg.)

RN 50-81-7 HCPLUS

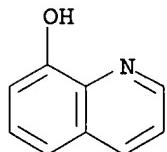
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L60 ANSWER 13 OF 19 HCPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1980:403027 HCPLUS

DOCUMENT NUMBER: 93:3027

TITLE: Tryptophan hydroxylase. The role of oxygen, iron, and sulfhydryl groups as determinants of stability and catalytic activity

AUTHOR(S): Kuhn, Donald M.; Ruskin, Belle; Lovenberg, Walter

CORPORATE SOURCE: Hypertension-Endocr. Branch, Natl. Heart, Lung, Blood Inst., Bethesda, MD, 20205, USA

SOURCE: Journal of Biological Chemistry (1980), 255(9), 4137-43

CODEN: JBCHA3; ISSN: 0021-9258

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Tryptophan hydroxylase (EC 1.14.16.4) from rat midbrain is inactivated upon exposure to O. The degree of inactivation is dependent both on the temp. and partial pressure of O to which the enzyme is exposed.

Furthermore, mol. O, and not an O or OH radical, is responsible for the inactivation. Sulfhydryl compds. and reductants partially protect the hydroxylase from inactivation by O. Enzyme inhibited by O can be reconstituted by anaerobic incubation in the presence of dithiothreitol and Fe<sup>2+</sup> at 25.degree., and in some expts. the inclusion of inorg. sulfide, in addn. to dithiothreitol and Fe<sup>2+</sup>, led to even greater recoveries of activity. Preincubation of tryptophan hydroxylase with various sulfhydryl reagents or disulfide compds. also produces inactivation which can be rapidly reversed by dithiothreitol. Tryptophan protects the enzyme from inactivation by sulfhydryl reagents and disulfides but not from inactivation by O. Finally, the enzyme was inhibited by a variety of Fe chelators. These results suggest that the catalytic activity of tryptophan hydroxylase is dependent on the

oxidn.-redn. status of SH groups and Fe sites, which are probably located at the catalytic (substrate-binding) site of the enzyme.

IT 7439-89-6, biological studies

RL: BIOL (Biological study)

(of tryptophan hydroxylase of brain, activity in relation to)

RN 7439-89-6 HCPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

## Fe

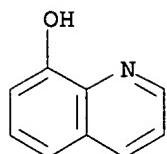
IT 148-24-3, biological studies

RL: BIOL (Biological study)

(tryptophan hydroxylase of brain inhibition by)

RN 148-24-3 HCPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 50-81-7, biological studies

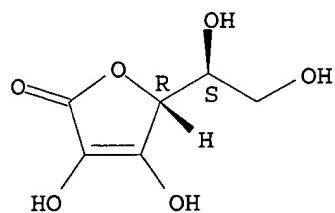
RL: BIOL (Biological study)

(tryptophan hydroxylase protection against oxygen inactivation by)

RN 50-81-7 HCPLUS

CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L60 ANSWER 14 OF 19 HCPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1979:18202 HCPLUS

DOCUMENT NUMBER: 90:18202

TITLE: Specificity and essential groups in alhagain

AUTHOR(S): Yeshodha, K.; Dhar, S. C.; Santappa, M.

CORPORATE SOURCE: Cent. Leather Res. Inst., Madras, India

SOURCE: Leather Science (Madras) (1978), 25(2), 68-76

CODEN: LESCA9; ISSN: 0023-9771

DOCUMENT TYPE: Journal

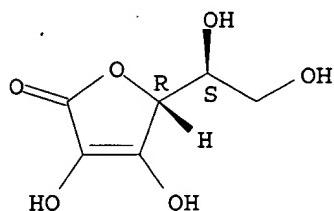
LANGUAGE: English

AB The effects of certain oxidizing, reducing, SH-group blocking agents, meal chelating agents, metallic ions, and certain other specific agents on the reactive groups and proteolytic activity of alhagain were studied.

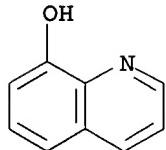
The results show that the SH group of the enzyme may be essential for its activity. The specificity of alhagain was studied by quant. estg. the free amino acids, N- and C-terminal amino acids, of the peptides liberated from the hydrolysis of the B-chain oxidized insulin for 6 h. With ref. to the known structure of the B-chain, the major sites of action of alhagain were detd. The results indicate that alhagain preferentially attacks peptide bonds involving the amino or carboxyl groups of phenylalanine, amino groups of alanine and serine, and also carboxyl groups of lysine and glycine.

IT 50-81-7, biological studies 148-24-3, biological studies  
 7439-96-5, biological studies 7440-50-8, biological studies  
 RL: BIOL (Biological study)  
 (alhagain activation by)  
 RN 50-81-7 HCPLUS  
 CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7439-96-5 HCPLUS  
 CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

RN 7440-50-8 HCPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT 7439-89-6, biological studies  
 RL: BIOL (Biological study)  
 (alhagain inhibition by)  
 RN 7439-89-6 HCPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

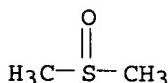
L60 ANSWER 15 OF 19 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1976:170232 HCPLUS  
 DOCUMENT NUMBER: 84:170232  
 TITLE: Rates of formation and dissociation, and the stability  
       of some manganese (II) and zinc(II) complexes with  
       bipyridyl-type ligands in dimethyl sulfoxide solution  
 Buck, Dorothy M. W.; Moore, Peter  
 Dep. Mol. Sci., Univ. Warwick, Coventry, UK  
 SOURCE: Journal of the Chemical Society, Dalton Transactions:  
       Inorganic Chemistry (1972-1999) (1976), (7), 638-42  
 CODEN: JCDTBI; ISSN: 0300-9246  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The rates of formation and dissociation were detd. for 1:1 complexes of Mn<sup>2+</sup> and Zn<sup>2+</sup> with bipyridyl-type ligands in Me<sub>2</sub>SO soln. by the stopped-flow method at temps. just above the f.p. of Me<sub>2</sub>SO. In some cases the reactions are too fast to measure, e.g. the reaction between [Mn(Me<sub>2</sub>SO)<sub>6</sub>]<sup>2+</sup> and 2,2'-bipyridine (L). Rate data were detd. for the formation and Hg<sup>2+</sup>-induced dissociations of [MnL(Me<sub>2</sub>SO)<sub>4</sub>]<sup>2+</sup> (L<sub>1</sub> = 1,10-phenanthroline) and [ZnL(Me<sub>2</sub>SO)<sub>4</sub>]<sup>2+</sup>, and their first stability consts. in Me<sub>2</sub>SO were estd. Rate consts. were estd. for Me<sub>2</sub>SO solvent exchange for Mn<sup>2+</sup> and Zn<sup>2+</sup>. The reaction between a large excess of [Mn(Me<sub>2</sub>SO)<sub>6</sub>]<sup>2+</sup> and 2,2':6',2"-terpyridine is complicated; an initial very rapid reaction is followed by a much slower process which was examd. by repetitive-scan spectrophotometry. The kinetics were detd. for the 2 steps and a mechanism was proposed in which the initial rapid reaction involves the formation of a binuclear intermediate and the slow step is assocd. with final chelate-ring closure.

IT 67-68-5, uses and miscellaneous

RL: USES (Uses)  
 (coordination reaction of manganese and zinc with bipyridyl-type  
 ligands in)

RN 67-68-5 HCPLUS

CN Methane, sulfinylbis- (9CI) (CA INDEX NAME)



IT 7439-96-5, reactions 7440-66-6, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (coordination reaction of, with bipyridyl-type ligands in dimethyl  
 sulfoxide)

RN 7439-96-5 HCPLUS

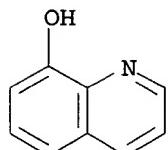
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

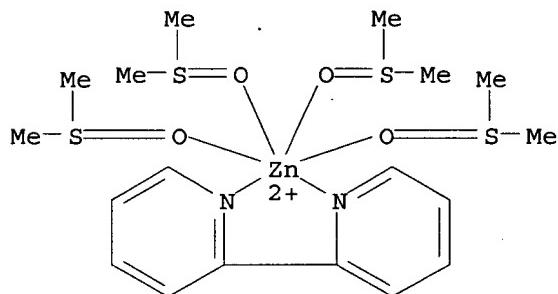
RN 7440-66-6 HCPLUS  
 CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

IT 148-24-3, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (coordination reaction of, with manganese)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 59538-19-1P  
 RL: PREP (Preparation)  
 (formation and mercury-induced dissocn. of, kinetics of)  
 RN 59538-19-1 HCPLUS  
 CN Zinc(2+), (2,2'-bipyridine-N,N')tetrakis[sulfinylbis[methane]-O]-,  
 (OC-6-22)- (9CI) (CA INDEX NAME)



L60 ANSWER 16 OF 19 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1972:558418 HCPLUS  
 DOCUMENT NUMBER: 77:158418  
 TITLE: Influence of the host lattice upon EPR coupling parameters and d-d transitions of planar copper(II) complexes  
 AUTHOR(S): Ammeter, J.; Rist, G.; Guenthard, Hs. H.  
 CORPORATE SOURCE: Phys. Chem. Lab., Swiss Fed. Inst. Technol., Zurich, Switz.  
 SOURCE: Journal of Chemical Physics (1972), 57(9), 3852-66  
 CODEN: JCPSA6; ISSN: 0021-9606  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The EPR and optical spectra of 2 similar square-planar CuO<sub>2</sub>N<sub>2</sub> chelates, Cu hydroxyquinolate (CuOx<sub>2</sub>) and Cu picolinate (CuPic<sub>2</sub>)

were investigated. By studying both mols. in a series of several paramagnetic and diamagnetic single crystal matrixes, powders and solns., the dependence of the g tensor, metal hyperfine (hfs) tensor, N-hfs tensor and the optical d-d transitions on the host lattice was detd. The exptl. results show the shortcomings of the simple LCAO model generally used to describe the electronic structure of metal complexes. The use of free ion (or atom) wavefunctions for example leads to large overestns. of the pi.-delocalization parameters and of the amt. of g dependence on covalency. To obtain agreement with exptl., a scaling parameter (as proposed by K. Ruedenberg in 1962) for the metal 3d part of the involved MO's should be introduced to account for the virtual expansion of the AO's in antibonding orbitals. Variations of the effective charge appear to be negligible. This expansion results in a smaller spin-orbit const. and a smaller .ltbbrac.r-3.rtbbrac.3d parameter. This effect contributes substantially to the generally obsd. reduced spin-orbit and metal hfs interactions in covalent transition metal complexes.

IT 67-68-5, properties 148-24-3, properties

13978-85-3 21264-38-0 22602-39-7

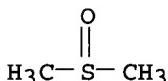
38745-22-1

RL: PRP (Properties)

(ESR and electronic spectrum of copper complex in)

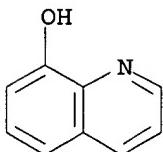
RN 67-68-5 HCPLUS

CN Methane, sulfinylbis- (9CI) (CA INDEX NAME)



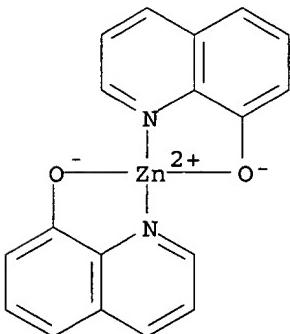
RN 148-24-3 HCPLUS

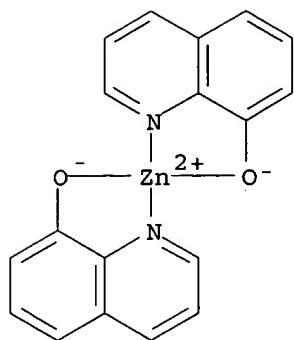
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



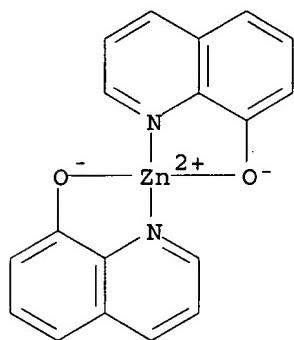
RN 13978-85-3 HCPLUS

CN Zinc, bis(8-quinolinolato-.kappa.N1,.kappa.O8)-, (T-4)- (9CI) (CA INDEX NAME)





RN 21264-38-0 HCAPLUS

CN Zinc, bis(8-quinolinolato-.kappa.N1,.kappa.O8)-, (T-4)-, dihydrate (9CI)  
(CA INDEX NAME)●2 H<sub>2</sub>O

RN 22602-39-7 HCAPLUS

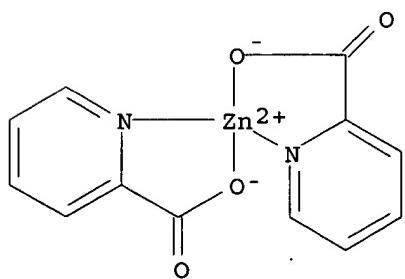
CN Zinc, bis(2-pyridinecarboxylato-N1,O2)-, (T-4)-, compd. with methanol  
(1:2) (9CI) (CA INDEX NAME)

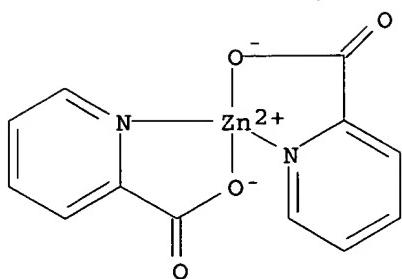
CM 1

CRN 17949-65-4

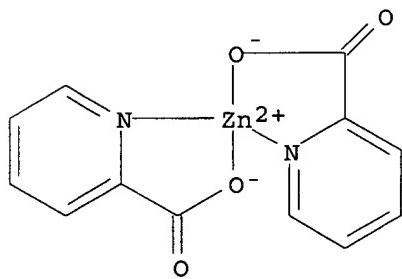
CMF C12 H8 N2 O4 Zn

CCI CCS





CM 2

CRN 67-56-1  
CMF C H4 OH<sub>3</sub>C—OHRN 38745-22-1 HCPLUS  
CN Zinc, bis(2-pyridinecarboxylato-N1,O2)-, tetra(hydrate-d2), (T-4) - (9CI)  
(CA INDEX NAME)●4 D<sub>2</sub>O

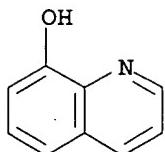
L60 ANSWER 17 OF 19 HCPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1965:14951 HCPLUS  
 DOCUMENT NUMBER: 62:14951  
 ORIGINAL REFERENCE NO.: 62:2687d  
 TITLE: Catalytic effects of copper complexes on the oxidation  
       of l-ascorbic acid  
 AUTHOR(S): Onishi, Isao; Hara, Tadashi  
 CORPORATE SOURCE: Doshisha Univ., Kyoto  
 SOURCE: Bulletin of the Chemical Society of Japan (1964),  
       37(9), 1317-20  
 CODEN: BCSJA8; ISSN: 0009-2673  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The stability consts. Ks of various kinds of Cu complexes were estd. on  
       the basis of the decrease in the catalytic activity of Cu(II) in the

presence of chelating agents. The rate const. was inversely proportional to  $\log [1 + K_s[\cdot\text{UPSILON.}]^n]$ , where  $\cdot\text{UPSILON.}$  is the concn. of dissocd. chelating agent.

IT 7440-50-8, Copper  
 (compds., catalysts, in oxidn. of L-ascorbic acid)  
 RN 7440-50-8 HCPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

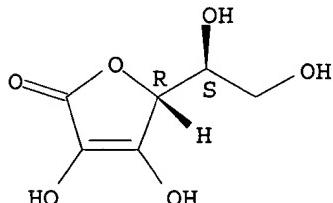
Cu

IT 148-24-3, 8-Quinolinol  
 (copper complexes, effect on oxidn. of L-ascorbic acid)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 50-81-7, Ascorbic acid  
 (oxidn. of, Cu complexes in)  
 RN 50-81-7 HCPLUS  
 CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L60 ANSWER 18 OF 19 HCPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1963:436743 HCPLUS

DOCUMENT NUMBER: 59:36743

ORIGINAL REFERENCE NO.: 59:6663c-e

TITLE: Properties of nicotinamide deamidase of pigeon liver extracts

AUTHOR(S): Curti, B.; Porcellati, G.

CORPORATE SOURCE: Univ. Cagliari, Italy

SOURCE: Giorn. Biochim. (1963), 12(1), 13-27

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB An enzyme causing deamidation of nicotinamide (I) was demonstrated in liver and kidney exts. of pigeons. The activity of nicotinamide deamidase (II) was highest in the nuclei, less in the mitochondria and microsomes (Rajagopolon, et al., CA 52, 18756b). II was prep'd. by extg. the

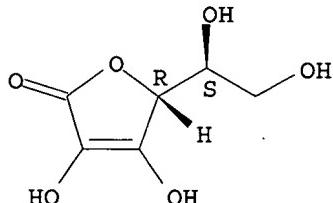
centrifuge ppt. obtained at 1400 g for 40 min. with BuOH, Me<sub>2</sub>CO, and Et<sub>2</sub>O. The resulting powder was treated with 0.2M phosphate buffer, pH 8.3, and centrifuged at 19,000 g for 2 hrs. Activity of the supernatant was 365 .gamma. NH<sub>3</sub> formed per 2.77 mg. N/60 min. at 37.degree.. For enzymic activity the optimum pH is .apprx.8.3 and at this pH the Michaelis const. is 1.85 .times. 10<sup>-3</sup>M. The relative rates of deamidation were: I 100, L-glutamine 55, benzamide 50, L-asparagine 16, D-asparagine 8, nicotinamide adenine dinucleotide 8, benzyl-L-argininamide 8, thiourea 5, formamide 5, N-methylnicotinamide 5, L-arginine 3. II is inactive against hydrazine, leucylnaphthylamide, isonicotinthioamide, 6-aminonicotinamide, acetamide, urea, adenine, and nicotinic acid. II deamidates I-riboside 10 times more readily than I-mononucleotide. Among 11 investigated metals, Ag<sup>+</sup> and Hg<sup>++</sup> cause a complete, Cu<sup>++</sup> a 72% inhibition of II. The following chelates had a strong inhibitory effect (%): .alpha.,.alpha.'-di-pyridyl 90, 8-quinolinol 90, o-phenanthroline 90, NaF 63, 6-aminonicotinamide 48, p-chloromercuribenzoic acid 42. The results are discussed in relation to the possible metabolism of I.

IT 7440-50-8, Copper  
 (compds., nicotinamide deamidase inhibition by)  
 RN 7440-50-8 HCPLUS  
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

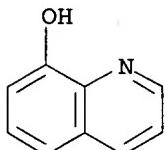
## Cu

IT 50-81-7, Ascorbic acid  
 (metabolism of, enzymes in)  
 RN 50-81-7 HCPLUS  
 CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



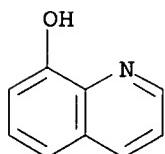
IT 148-24-3, 8-Quinolinol  
 (nicotinamide deamidase inhibition by)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



ACCESSION NUMBER: 1961:54527 HCPLUS  
 DOCUMENT NUMBER: 55:54527  
 ORIGINAL REFERENCE NO.: 55:10523g-i,10524a-b  
 TITLE: The catalysis of ascorbate oxidation by ionic copper  
       and its complexes  
 AUTHOR(S): Butt, V. S.; Hallaway, Mary  
 CORPORATE SOURCE: Univ. Oxford, UK  
 SOURCE: Archives of Biochemistry and Biophysics (1961), 92,  
       24-32  
 CODEN: ABBIA4; ISSN: 0003-9861  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable

AB With 1.0 and 21.8 mM ascorbate (I) and 0.034 mM Cu, the first-order constant was  $35.2 \pm 0.2$  sec.<sup>-1</sup> at 30 degree.. Below 0.020 mM the rate increases very rapidly with increase in the Cu content, above which a constant, but less rapid, increase was found. The rate constant increased with the O tension in the gas phase over the whole range up to 100% O. Between pH 3.3 and 7.4, the rate of I oxidn. increased steadily, the stimulation being more pronounced at 0.054 mM CuSO<sub>4</sub> than at 0.01 mM. The phosphate buffer generally used was less inhibitory than most others effective at pH 5.5. At a ratio of 1 mole of chelating agent to 1 g. atom Cu, the rate was in each case reduced by 40-50%, although ethylenediaminetetraacetate (EDTA) reduced it by as much as 85%. At a ratio of 2:1, diethyldithiocarbamate and EDTA completely inhibited the oxidn.; oxine and ferron both required rather higher ratios. With quinaldinic acid, 1,10-phenanthroline, and 2,2'-dipyridyl, oxidn. proceeded even at the highest concn. applied. At ratios above 2:1, both phenanthroline and dipyridyl modified the form of the reaction. The reaction proceeded according to zero-order kinetics with respect to I at first, but later changed to first-order. With increase in the concn. of chelating agent, the rates of the zero- and first-order reactions were each inhibited, and the I concn. at which the reaction order changed became greater. With thiourea, at molar ratios from 1:1 up to 10:1, the reaction was at first severely inhibited, but after a lag phase, the rate rapidly increased to the control level and first-order kinetics were followed. I oxidn. was completely inhibited with a CO (95%)-O<sub>2</sub> (5%) mixt. Low levels of azide (azide to Cu < 5) did not alter the rate, but at the higher Cu concn., increase in azide induced stimulation up to a max., which then declined until, at 10 mM azide, the rate constant fell below that of the control. The stimulation was not observed at the lower Cu concn., even at the same chelate to Cu ratio, though some increase in rate was observed at much higher levels of azide. This suggests competition between azide and I. CN-, though effective at lower concns. and CN- to Cu ratios, is similar to azide.

IT 148-24-3, 8-Quinolinol  
     (ascorbic acid oxidn. by Cu in presence of)  
 RN 148-24-3 HCPLUS  
 CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 7440-50-8, Copper

Cook 09/021,421

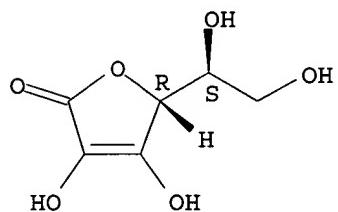
April 22, 2004

(ascorbic acid oxidn. by, **chelating agent effect on**)  
RN 7440-50-8 HCAPLUS  
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

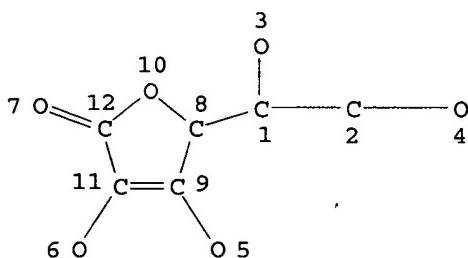
(compounds, ascorbic acid oxidn. by  
IT 50-81-7, Ascorbic acid  
(oxidn. of, by Cu, effect of **chelating agents on**)  
RN 50-81-7 HCAPLUS  
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> d que

L1	1 SEA FILE=REGISTRY ABB=ON	PLU=ON	8-HYDROXYQUINOLINE/CN
L18	165673 SEA FILE=REGISTRY ABB=ON	PLU=ON	ZN/ELS
L23	1 SEA FILE=REGISTRY ABB=ON	PLU=ON	IRON/CN
L26	1 SEA FILE=REGISTRY ABB=ON	PLU=ON	COBALT/CN
L27	263268 SEA FILE=REGISTRY ABB=ON	PLU=ON	MO/ELS
L29	1 SEA FILE=REGISTRY ABB=ON	PLU=ON	MANGANESE/CN
L31	1 SEA FILE=REGISTRY ABB=ON	PLU=ON	COPPER/CN
L32	2026 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L1 AND (L23 OR L18 OR L26 OR L27 OR L29 OR L31)
L49	1 SEA FILE=REGISTRY ABB=ON	PLU=ON	<del>PROPYLGlyCOL</del> /CN
L51	97 SEA FILE=REGISTRY ABB=ON	PLU=ON	<del>ECITHEN?</del> /CN
L52	1 SEA FILE=REGISTRY ABB=ON	PLU=ON	<del>DIMETHYL SULFOXIDE</del> /CN
L53	1 SEA FILE=REGISTRY ABB=ON	PLU=ON	<del>UNORDHYDROGUATARETIC</del>
	<del>GACID</del> /CN		
L55	STR		



#### NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

#### GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 12

#### STEREO ATTRIBUTES: NONE

L56	1025 SEA FILE=REGISTRY FAM FUL L55		
L57	102 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L32 AND (L49 OR L51 OR L52 OR L53 OR L56)
L58	11 SEA FILE=HCAPLUS ABB=ON	PLU=ON	L57 AND (BAC OR DMA OR PKT OR PAC OR THU)/RL

*Therapeutic use*

~~> d bib ab hit ind 158 1-11~~

L58 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2001:300515 HCAPLUS  
 DOCUMENT NUMBER: 134:300833  
 TITLE: Compositions containing pyroglutamic acid for  
prevention and treatment of cold and influenza-like  
symptoms and their methods of use  
 INVENTOR(S): Rennie, Paul John; King, Simon Phillip; Biedermann,  
Kimberly Ann; Morgan, Jeffrey Michael  
 PATENT ASSIGNEE(S): The Procter & Gamble Company, USA  
 SOURCE: PCT Int. Appl., 15 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English

FAMILY ACC. NUM. COUNT: 25

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001028556	A2	20010426	WO 2000-US28856	20001019
WO 2001028556	A3	20011011		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1242073	A2	20020925	EP 2000-973658	20001019
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003512325	T2	20030402	JP 2001-531386	20001019
NO 2002001830	A	20020418	NO 2002-1830	20020418

PRIORITY APPLN. INFO.: US 1999-421131 A 19991019  
WO 2000-US28856 W 20001019

AB Nasal compns. for prevention and treatment of cold and influenza-like symptoms due to respiratory tract viral infections based on pyroglutamic acid (0.01-20%) and an org. acid having a dissocn. const. (pKa) of 3.0-5.0 are described. These compds. and their method of application are effective in both preventing the onset of the symptoms of colds and influenza or significantly mitigating them if already afflicted with such symptoms. A nasal spray compn. was prep'd. contg. (by wt.) pyroglutamic acid 1.00%, ascorbic acid 1.00%, phytic acid as a chelating agent 1.00%, a mucoadhesive polymer (Carbopol 980) 1.00%, eucalyptol 0.01%, Ph Et alc. 0.50%, and water up to 100%, resp. The pH was adjusted to 3.5 with addn. of NaOH. A recommended dosage was 100 .mu.L of the soln. into each nostril three times a day.

IC ICM A61K031-4015  
ICS A61K031-4015; A61K033-30; A61K033-24; A61K031-375; A61K031-194;  
A61K031-19

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1

IT Vinyl compounds, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(carboxy-contg., polymers; compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)

IT Carboxylic acids, biological studies

Chlorides, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)

IT Carboxylic acids, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(dicarboxylic; compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)

- IT Carboxylic acids, biological studies  
 RL: **BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)**  
     (salts; compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)
- IT Polyphosphoric acids  
 RL: **THU (Therapeutic use); BIOL (Biological study); USES (Uses)**  
     (sodium salts; compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)
- IT Carboxylic acids, biological studies  
 RL: **BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)**  
     (tricarboxylic acids; compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)
- IT 50-21-5, Lactic acid, biological studies 50-21-5D, Lactic acid, salts  
 50-81-7, Ascorbic acid, biological studies 50-81-7D,  
 Ascorbic acid, salts 56-84-8, Aspartic acid, biological studies  
 56-86-0, Glutamic acid, biological studies 64-19-7, Acetic acid,  
 biological studies 64-19-7D, Acetic acid, salts, biological studies  
 65-85-0, Benzoic acid, biological studies 65-85-0D, Benzoic acid, salts,  
 biological studies 69-72-7, Salicylic acid, biological studies  
 69-72-7D, Salicylic acid, salts 77-92-9, Citric acid, biological studies  
 77-92-9D, Citric acid, salts 79-14-1, Glycolic acid, biological studies  
 87-69-4, Tartaric acid, biological studies 88-99-3, Phthalic acid,  
 biological studies 98-79-3, Pyroglutamic acid 110-15-6, Succinic acid,  
 biological studies 110-15-6D, Succinic acid, salts 110-17-8, Fumaric  
 acid, biological studies 110-94-1, Glutaric acid 110-94-1D, Glutaric  
 acid, salts 124-04-9, Adipic acid, biological studies 141-82-2,  
 Malonic acid, biological studies 141-82-2D, Malonic acid, salts  
 526-95-4, Gluconic acid 526-95-4D, Gluconic acid, salts 557-34-6  
 Zinc acetate 994-36-5, Sodium citrate 6915-15-7, Malic acid  
 6915-15-7D, Malic acid, salts  
 RL: **BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)**  
     (compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)
- IT 60-12-8, Phenyl ethyl alcohol 62-33-9, Calcium EDTA 63-42-3, Lactose  
 64-02-8, Tetrasodium EDTA 64-17-5, Ethanol, biological studies  
 83-86-3, Phytic acid 139-33-3, Disodium EDTA 148-24-3,  
 8-Hydroxyquinoline, biological studies 150-25-4, Di(hydroxyethyl)glycine  
 470-82-6, Eucalyptol 9003-01-4, Carboxypolyethylene 26266-58-0,  
 Sorbitan trioleate 138757-67-2, Carbopol 980  
 RL: **THU (Therapeutic use); BIOL (Biological study); USES (Uses)**  
     (compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)
- IT 79-10-7D, Acrylic acid, esters, polymers  
 RL: **THU (Therapeutic use); BIOL (Biological study); USES (Uses)**  
     (crosslinked; compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)

L58 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:708658 HCAPLUS

DOCUMENT NUMBER: 131:327615

TITLE: Adhesive applicator with polymerization agents and/or bioactive material

INVENTOR(S): Narang, Upvan; Nicholson, William Stuart Cooper

PATENT ASSIGNEE(S): Closure Medical Corporation, USA  
 SOURCE: PCT Int. Appl., 43 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9955394	A1	19991104	WO 1999-US9373	19990430
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2330439	AA	19991104	CA 1999-2330439	19990430
AU 9938729	A1	19991116	AU 1999-38729	19990430
AU 741078	B2	20011122		
BR 9910064	A	20001226	BR 1999-10064	19990430
EP 1073484	A1	20010207	EP 1999-921544	19990430
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002512855	T2	20020508	JP 2000-545590	19990430

PRIORITY APPLN. INFO.: US 1998-69979 A 19980430  
WO 1999-US9373 W 19990430

AB A method of applying a bioactive agent and/or a polymn. or crosslinking rate modifier and/or a polymn. initiator to an applicator tip includes dissolving or dispersing the rate modifier, the initiator, and/or the bioactive agent in a low b.p. solvent, applying the resulting soln. or dispersion to the applicator tip, and drying the applicator tip. The initiator and/or rate modifier is preferably applied in a methanol solvent and distributed along a concn. gradient on the applicator tip. A figure showing the polymn. temp. of a 2-octyl cyanoacrylate compn. dispensed through applicator tips having an initiator applied with methanol and with acetone is presented.

IC ICM A61L025-00

CC 63-8 (Pharmaceuticals)

Section cross-reference(s): 38

IT Crown ethers

Tannins

RL: POF (Polymer in formulation); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(adhesive applicator with polymn. agents and/or bioactive material)

IT Alcohols, biological studies

Bacteriocins

Polyamides, biological studies

Polyesters, biological studies

Polyolefins

Polyoxyalkylenes, biological studies

Sphingolipids

Steroids, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(adhesive applicator with polymn. agents and/or bioactive material)

IT Quaternary ammonium compounds, biological studies

RL: POF (Polymer in formulation); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)

(alkylbenzyldimethyl, chlorides; adhesive applicator with polymn. agents and/or bioactive material)

IT Metacyclophanes

RL: POF (Polymer in formulation); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(calixarenes; adhesive applicator with polymn. agents and/or bioactive material)

IT Epoxides

RL: POF (Polymer in formulation); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(polymeric; adhesive applicator with polymn. agents and/or bioactive material)

IT 50-81-7, L-Ascorbic acid, biological studies 57-13-6, Urea, biological studies 61-54-1, Tryptamine 62-56-6, Thiourea, biological studies 74-79-3, L-Arginine, biological studies 78-67-1, Azobisisobutyronitrile 99-24-1, Methyl gallate 105-58-8, Diethyl carbonate 107-21-1, 1,2-Ethanediol, biological studies 110-05-4, Di-tert-butyl peroxide 122-52-1, Triethyl phosphite 288-32-4, Imidazole, biological studies 301-10-0, Stannous octoate 603-35-0, Triphenylphosphine, biological studies 1191-50-0, Sodium tetradecyl sulfate 1309-42-8, Magnesium hydroxide 1344-09-8, Sodium silicate 1643-19-2, Tetrabutyl ammonium bromide 6701-17-3, 2-Octyl cyanoacrylate 6833-84-7, Nonactin 7631-90-5, Sodium bisulfite 7778-18-9, Calcium sulfate 9003-39-8, Povidone 9005-64-5, Polysorbate 20 9005-65-6, Polysorbate 80 14933-08-5, Dodecyldimethyl(3-sulfopropyl)ammonium hydroxide 17090-79-8, Monensin 106392-12-5, Poloxamer

RL: POF (Polymer in formulation); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)

(adhesive applicator with polymn. agents and/or bioactive material)

IT 55-56-1, Chlorhexidine 59-87-0, Nitrofurazone 60-54-8, Tetracycline 62-56-6D, Thiourea, quinolinone derivs., biological studies 64-19-7, Acetic acid, biological studies 127-65-1, Chloramine t 130-26-7, Clioquinol 139-12-8, Aluminum acetate 148-24-3, 8-Hydroxyquinoline, biological studies 532-31-0, Silver benzoate 534-16-7, Silver carbonate 547-32-0, Sodium sulfadiazine 563-63-3, Silver acetate 1314-13-2, Zinc oxide, biological studies 1404-26-8, Polymyxin B 1405-10-3 1405-20-5, Polymyxin b sulfate 1405-41-0, Gentamycin sulfate 1405-87-4, Bacitracin 1405-89-6, Bacitracin zinc 1406-05-9, Penicillin 1406-11-7, Polymyxin 6998-60-3, Rifamycin 7553-56-2, Iodine, biological studies 7681-52-9, Sodium hypochlorite 7722-64-7, Potassium permanganate 7722-84-1, Hydrogen peroxide, biological studies 7761-88-8, Silver nitrate, biological studies 7783-90-6, Silver chloride, biological studies 7783-96-2, Silver iodide 8044-71-1, Cetrimide 9003-39-8D, Polyvidone, iodinated 10118-90-8, Minocycline 10294-26-5, Silver sulfate 11081-39-3, Polymycin 12650-69-0, Mupirocin 13292-46-1, Rifampin 16923-58-3 16941-12-1, Chloroplatinic acid 18323-44-9, Clindamycin 20667-12-3, Silver oxide 22199-08-2, Silver sulfadiazine 25322-68-3 25655-41-8, Betadine 26027-38-3, Nonoxytol 9 36701-38-9, Silver citrate 41748-43-0, Chlorhexidine sulfate 66219-86-1, Zinc sulfadiazine 77146-42-0, Chlorhexidine phosphonilate 85721-33-1, Ciprofloxacin 104534-80-7D, Quinolinone, thiourea derivs. 248259-31-6, Calcium chloroplatinate

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(adhesive applicator with polymn. agents and/or bioactive material)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1999:594841 HCAPLUS  
 DOCUMENT NUMBER: 131:219020  
 TITLE: Tissue paper having antimicrobial skin lotion  
 INVENTOR(S): Klofta, Thomas James; Steinhardt, Mark John  
 PATENT ASSIGNEE(S): The Procter & Gamble Company, USA  
 SOURCE: PCT Int. Appl., 60 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 9  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9945771	A1	19990916	WO 1999-US4221	19990226
W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6238682	B1	20010529	US 1998-41231	19980312
CA 2322506	AA	19990916	CA 1999-2322506	19990226
AU 9927929	A1	19990927	AU 1999-27929	19990226
AU 747849	B2	20020523		
BR 9908715	A	20001121	BR 1999-8715	19990226
EP 1061799	A1	20001227	EP 1999-908519	19990226
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
JP 2002505894	T2	20020226	JP 2000-535199	19990226
ZA 9901999	A	19990913	ZA 1999-1999	19990311
PRIORITY APPLN. INFO.:			US 1998-41231	A 19980312
			US 1993-165767	B1 19931213
			US 1995-398727	A1 19950306
			US 1996-658342	A1 19960605
			WO 1999-US4221	W 19990226

AB An anhyd. lotion compn. for killing viruses and bacteria in addn. to imparting a soft, lubricious, lotion-like feel when applied to tissue paper and tissue paper treated with such lotion compns. are disclosed. The antiviral action of the lotion is due to the addn. of an org. acid such as citric acid or salicylic acid. The antibacterial action is due to the addn. of antibacterial agents such as triclosan. The solubilization of the antiviral and antibacterial agents within the lotion matrix is aided by the addn. of hydrophilic solvents and hydrophilic surfactants. The lubricious lotions also contain a plastic or fluid skin conditioning agent such as petrolatum, an optional immobilizing agent such as a fatty alc. or fatty acid to immobilize the skin conditioning agent on the surface of the tissue paper web and a hydrophilic surfactant to improve wettability when applied to toilet tissue. Because less lotion is required to impart the desired soft, lotion-like feel benefits, detrimental effects on the tensile strength and caliper of the lotioned paper are minimized or avoided. The anhyd. nature of the lotions also aids in the maintenance of such phys. properties as tensile and caliper. A lotion contained petrolatum 41.0, cetyl alc. 28.6, cetareth-10 15.2, salicylic acid 10.1, and triclosan 5.1%.

IC ICM A01N025-34

ICS A47K010-16  
 CC 62-4 (Essential Oils and Cosmetics)  
 IT Alcohols, biological studies  
 Fatty acids, biological studies  
 RL: **BAC** (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (C12-22; tissue paper having antimicrobial skin lotion)  
 IT Quaternary ammonium compounds, biological studies  
 RL: **BAC** (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (alkylbenzyldimethyl, chlorides; tissue paper having antimicrobial skin lotion)  
 IT Amides, biological studies  
 RL: **BAC** (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (fatty, polyhydroxy; tissue paper having antimicrobial skin lotion)  
 IT Essential oils  
 RL: **BAC** (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (lemon; tissue paper having antimicrobial skin lotion)  
 IT Acids, biological studies  
 RL: **BAC** (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (org.; tissue paper having antimicrobial skin lotion)  
 IT Waxes  
 RL: **BAC** (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (spermaceti; tissue paper having antimicrobial skin lotion)  
 IT Essential oils  
 RL: **BAC** (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (tissue paper having antimicrobial skin lotion)  
 IT Alcohols, biological studies  
 RL: **BAC** (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (tissue paper having antimicrobial skin lotion)  
 IT Vitamins  
 RL: **BAC** (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (tissue paper having antimicrobial skin lotion)  
 IT 50-81-7, L-Ascorbic acid, biological studies 55-56-1,  
 Chlorhexidine 65-85-0, Benzoic acid, biological studies 69-72-7,  
 biological studies 77-92-9, biological studies 87-69-4, biological  
 studies 88-04-0, Pcmx 94-13-3, Propylparaben 97-53-0, Eugenol  
 99-76-3, Methylparaben 101-20-2, Triclocarban 102-76-1, Triacetin  
 111-02-4, Squalene 121-54-0, Benzethonium chloride 123-78-4,  
 D-Sphingosine 125-33-7, Hexamidine 148-24-3,  
 8-Hydroxyquinoline, biological studies 369-77-7, Cloflucarban  
 499-44-5, Hinokitiol 1400-61-9, Nystatin 1404-04-2, Neomycin  
 1404-26-8, Polymyxin B 1405-87-4, Bacitracin 3380-34-5 6915-15-7,

Malic acid 7664-38-2, Phosphoric acid, biological studies  
**13463-41-7**, ZPT 15922-78-8, Sodium omadine 20910-06-9,  
 Cholesteryl 25655-41-8, Povidone iodine 32289-58-0, Polyhexamethylene  
 biguanide hydrochloride 39236-46-9, Imidazolidinyl urea 55965-84-9,  
 Kathon cg 68890-66-4, Octopirox 75345-27-6, Onamer m  
 RL: **BAC** (Biological activity or effector, except adverse); BSU  
 (Biological study, unclassified); BUU (Biological use, unclassified); BIOL  
 (Biological study); USES (Uses)  
 (tissue paper having antimicrobial skin lotion)

- IT 76-22-2, Camphor 81-13-0, Panthenol 89-78-1, Menthol 89-83-8, Thymol  
 106-24-1 119-36-8, Methyl salicylate 470-82-6, Eucalyptol  
 12441-09-7D, Sorbitan, esters  
 RL: **BAC** (Biological activity or effector, except adverse); BSU  
 (Biological study, unclassified); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (tissue paper having antimicrobial skin lotion)
- IT 56-81-5, 1,2,3-Propanetriol, biological studies 57-55-6,  
 1,2-Propanediol, biological studies 64-17-5, Ethanol, biological studies  
 67-63-0, Isopropanol, biological studies 71-36-3, 1-Butanol, biological  
 studies 107-21-1, 1,2-Ethanediol, biological studies 107-41-5,  
 Hexylene glycol 122-99-6, 2-Phenoxyethanol 1321-23-9, Chloroxylenol  
 9002-92-0, Brij 30 9004-95-9, Brij 56 9005-64-5, Tween 20 9005-67-8,  
 Tween 61 9016-00-6, Polydimethylsiloxane 25322-69-4 26446-35-5,  
 Acetoglyceride 31900-57-9, Polydimethylsiloxane  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
 (Uses)  
 (tissue paper having antimicrobial skin lotion)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1999:511033 HCAPLUS  
 DOCUMENT NUMBER: 131:139492  
 TITLE: Chelated 8-hydroxyquinoline for the treatment of  
 epithelial lesions  
 INVENTOR(S): Jordan, Russel T.; Hanson, Carl C.; Potestio, Frank S.  
 PATENT ASSIGNEE(S): Dermex Pharmaceuticals, LLC, USA  
 SOURCE: PCT Int. Appl., 34 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9939721	A1	19990812	WO 1999-US2817	19990210
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
CA 2320628	AA	19990812	CA 1999-2320628	19990210
AU 9925956	A1	19990823	AU 1999-25956	19990210
AU 755521	B2	20021212		

EP 1052999	A1	20001122	EP 1999-905911	19990210
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
NZ 506367	A	20030328	NZ 1999-506367	19990210
US 6476014	B1	20021105	US 2001-601304	20010102
US 2003113381	A1	20030619	US 2002-247161	20020918
US 2003114484	A1	20030619	US 2002-247526	20020918
PRIORITY APPLN. INFO.:			US 1998-21421	A2 19980210
			WO 1999-US2817	W 19990210
			US 2001-601304	A3 20010102

- AB Oxinates including 8-hydroxyquinoline and a heavy metal are topically applied to epidermal lesions for therapeutic effect. The compn. demonstrates selective toxicity with a therapeutic index of 100% on human lung cancer, breast cancer, melanoma, venereal warts, male veruoca warts, lesions produced by human papilloma virus, basal cell carcinoma, solar keratosis, and Kaposi's sarcoma. In veterinary applications where dogs, cats, and horses are the patients, the compn. shows a 100% therapeutic index with selective toxicity against eye cancer, sarcoids, sarcoma, malignant melanoma, rectal adenoma, histiocytoma, and sebaceous adenoma.
- IC ICM A61K033-00  
ICS A61K033-24
- CC 1-6 (Pharmacology)  
Section cross-reference(s): 63
- IT Glycols, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(chelated hydroxyquinoline for treatment of epithelial lesions)
- IT Heavy metals  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(chelates; chelated hydroxyquinoline for treatment of epithelial lesions)
- IT Polyoxyalkylenes, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(ethers, propylene glycol polyoxyalkylene ether derivs.; chelated hydroxyquinoline for treatment of epithelial lesions)
- IT Lecithins  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(penetrant; chelated hydroxyquinoline for treatment of epithelial lesions)
- IT 50-81-7, L-Ascorbic acid, biological studies 50-81-7D,  
Ascorbic acid, derivs. 500-38-9 500-38-9D, derivs.  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(antioxidant; chelated hydroxyquinoline for treatment of epithelial lesions)
- IT 57-55-6D, Propylene glycol, polyoxyalkylene ether derivs.  
148-24-3D, 8-Hydroxyquinoline, chelates 7439-89-6D,  
Iron, chelates with 8-hydroxyquinoline, biological studies 7439-96-5D, Manganese, chelates with 8-hydroxyquinoline, biological studies 7439-98-7D, Molybdenum, chelates with 8-hydroxyquinoline, biological studies 7440-48-4D, Cobalt, chelates with 8-hydroxyquinoline, biological studies 7440-50-8D, Copper, chelates with 8-hydroxyquinoline, biological studies 13978-85-3, Zinc 8-hydroxyquinolinate  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(chelated hydroxyquinoline for treatment of epithelial lesions)

IT 57-55-6, 1,2-Propanediol, biological studies 134-03-2,  
 Sodium ascorbate 4468-02-4, Zinc gluconate 8049-65-8,  
 Plastibase 50w 106392-12-5, Pluronic F 127 236391-72-3, Aquabase  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (chelated hydroxyquinoline for treatment of epithelial lesions)

IT 67-68-5, Dimethyl sulfoxide, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (penetrant; chelated hydroxyquinoline for treatment of epithelial  
 lesions)

IT 148-24-3, 8-Hydroxyquinoline, reactions 7646-85-7, Zinc  
 chloride, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction; chelated hydroxyquinoline for treatment of epithelial  
 lesions)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1998:582385 HCAPLUS  
 DOCUMENT NUMBER: 129:342354  
 TITLE: Ceramide accumulation during oxidant renal tubular  
 injury: mechanisms and potential consequences  
 AUTHOR(S): Zager, Richard A.; Conrad, D. Scott; Burkhardt, Kristin  
 CORPORATE SOURCE: Department of Medicine, University of Washington,  
 Seattle, WA, USA  
 SOURCE: Journal of the American Society of Nephrology (1998),  
 9(9), 1670-1680  
 CODEN: JASNEU; ISSN: 1046-6673  
 PUBLISHER: Williams & Wilkins  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Ceramide is an important signaling mol. that is typically generated via sphingomyelinase (SMase)-mediated sphingomyelin (SM) hydrolysis. Although diverse forms of renal injury elicit ceramide accumulation, the mol. determinants of this change and its contribution to tissue damage are poorly defined. The present study uses iron (Fe/hydroxyquinoline)-mediated injury of cultured human proximal tubular (HK-2) cells to gain addnl. insights into these issues. A 4-h Fe exposure doubled ceramide levels in the absence of cell death. This was independent of de novo synthesis, since ceramide synthase inhibition (with fumonisin B1) had no effect. Oxidant stress directly suppressed, rather than stimulated, SMase activity by: (1) decreasing SMase levels; (2) depleting SMase-stimulating glutathione; and (3) increasing SM resistance to SMase attack. Fe suppressed cell sphingosine levels (3 to 4 times ceramide/sphingosine ratio increments), suggesting a possible ceramidase block. Fe did not directly affect HK-2 ceramidase levels. However, arachidonic acid (C20:4) accumulation, a consequence of oxidant-induced phospholipase A2 (PLA2) activation, markedly suppressed ceramidase and stimulated SMase activity. Exogenous C20:4, as well as PLA2 (in doses simulating Fe-induced deacylation) recapitulated Fe's ceramide-generating effect. Because C20:4 is directly cytotoxic, it was hypothesized that ceramide might offset some of C20:4's adverse effects. Supporting this possibility were the following: (1) C20:4 exacerbated Fe toxicity; (2) this was abrogated by ceramide treatment; and (3) ceramide blunted Fe-mediated cell death. Conclusions: (1) ceramide accumulation during acute cell injury can be an adaptive response to PLA2 activation/C20:4 generation; (2) C20:4-induced ceramidase inhibition, coupled with SMase stimulation, may trigger this result; and (3) these ceramide increments may exert a "biostat" function, helping to offset C20:4/PLA2- and "catalytic" iron-mediated tubular cell

death.

CC 14-12 (Mammalian Pathological Biochemistry)

IT 7439-89-6, Iron, biological studies  
 RL: ADV (Adverse effect, including toxicity); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (-hydroxyquinoline oxidant; ceramide accumulation during oxidant renal tubular injury in relation to sphingomyelinase, glutathione, arachidonate, and phospholipase A2)

IT 148-24-3, 8-Quinolinol, biological studies  
 RL: ADV (Adverse effect, including toxicity); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (-iron oxidant; ceramide accumulation during oxidant renal tubular injury in relation to sphingomyelinase, glutathione, arachidonate, and phospholipase A2)

IT 9001-84-7, Phospholipase A2  
 RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (ceramide accumulation during oxidant renal tubular injury in relation to sphingomyelinase, glutathione, arachidonate, and phospholipase A2)

IT 9031-54-3, Sphingomyelinase C  
 RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
 (ceramide accumulation during oxidant renal tubular injury in relation to sphingomyelinase, glutathione, arachidonate, and phospholipase A2)

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1998:197363 HCAPLUS  
 DOCUMENT NUMBER: 128:262004  
 TITLE: Hydrogen peroxide disinfecting and sterilizing compositions  
 INVENTOR(S): Scoville, John R., Jr.; Novicova, Inna A.  
 PATENT ASSIGNEE(S): Cottrell, Ltd., USA  
 SOURCE: PCT Int. Appl., 24 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9811777	A1	19980326	WO 1997-US16421	19970917
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
AU 9744195	A1	19980414	AU 1997-44195	19970917
EP 957683	A1	19991124	EP 1997-942512	19970917
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
JP 2001506971	T2	20010529	JP 1998-514826	19970917

BR 9712070	A 20020115	BR 1997-12070	19970917
US 5900256	A 19990504	US 1998-24881	19980217
PRIORITY APPLN. INFO.:		US 1996-715337	A 19960918
		WO 1997-US16421	W 19970917

AB An aq. acidic disinfecting and sterilizing compn. for medical instruments, which may include brass, copper, aluminum, stainless steel, plastic and ceramic components. The compn. contains hydrogen peroxide, peracetic acid, a corrosion inhibitor system, a surfactant and a stabilizer. These compns. have in use stability and are effective as a disinfectant and/or sterilant either at room or when heated. For other applications, surfactants, sequestering agents and stabilizers may be optional. A compn. was prep'd. contg. H<sub>2</sub>O<sub>2</sub> 7.3, peracetic acid 0.23, 1-hydroxyethylidene-1,1-diphosphonic acid 0.70, 8-hydroxyquinoline 0.0035, propylene glycol 4.10, nonylphenol surfactant 0.002, 1,2,3-benzotriazole 1.00, Na nitrite 0.25, Na molybdate 0.25% by wt. and deionized water to 100%.

IC ICM A01N025-08

CC 63-8 (Pharmaceuticals)

IT Acids, biological studies

Glycols, biological studies

RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(hydrogen peroxide disinfecting and sterilizing compns.)

IT Carboxylic acids, biological studies

RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(peroxy; hydrogen peroxide disinfecting and sterilizing compns.)

IT 57-55-6, Propylene glycol, biological studies 65-85-0D, Benzoic acid, salts, biological studies 79-21-0, Peracetic acid 95-14-7,

1H-Benzotriazole 148-24-3, 8-Quinolinol, biological studies

2809-21-4, 1-Hydroxyethylidene-1,1-diphosphonic acid 7631-95-0,

Sodium molybdate 7632-00-0, Sodium nitrite

RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(hydrogen peroxide disinfecting and sterilizing compns.)

IT 7722-84-1, Hydrogen peroxide, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(hydrogen peroxide disinfecting and sterilizing compns.)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 7 OF 11 HCPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:212832 HCPLUS

DOCUMENT NUMBER: 124:282863

TITLE: The environment of the lipoxygenase iron binding site explored with novel hydroxypyridinone iron chelators

AUTHOR(S): Abeysinghe, Rajewa D.; Roberts, Pamela J.; Cooper, Chris E.; MacLean, Kirsteen H.; Hider, Robert C.; Porter, John B.

CORPORATE SOURCE: Dep. Clinical Hematol., Univ. Coll. London Med. Sch., London, WC1E 6HX, UK

SOURCE: Journal of Biological Chemistry (1996), 271(14), 7965-72

PUBLISHER: CODEN: JBCHA3; ISSN: 0021-9258

American Society for Biochemistry and Molecular Biology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The mechanisms of lipoxygenase inhibition by iron chelators have been

investigated in human neutrophils and in isolated soybean lipoxygenase. Their Fe(III)-contg. active sites have been targeted by synthesizing novel bidentate chelators from the hydroxypyridinone family sufficiently small to gain access through the hydrophobic channels of lipoxygenase. In stimulated human neutrophils, release of [3H]arachidonate-labeled eicosanoids is dependent on the lipid solv. of hydroxypyridinones, but larger hexadentate chelators have no effect on this or on total cellular leukotriene B4 prodn. Lipophilic hydroxypyridinones inhibit 5-lipoxygenase at equiv. concns. to the established inhibitor, piroprost, and show addnl. but minor anti-phospholipase A2 activity. Soybean 15-lipoxygenase inhibition is also dependent on the lipid solv. and coordination structure of chelators. Inhibition is assocd. with the formation of chelate-iron complexes, which are removed by dialysis without restoration of enzyme activity. Only after adding back iron is activity restored. ESR studies show the removal of the iron center signal ( $g = 6$ ) is concomitant with formation of Fe(III)-chelator complexes, identical in spectral shape and  $g$  value to 3:1 hydroxypyridinone Fe(III) complexes. Removal of iron is not the only mechanism by which hydroxypyridinones can inhibit lipoxygenase in intact cells, however, as a lipophilic non-iron-binding hydroxypyridinone, which shows no inhibition of the soybean lipoxygenase activity, partially inhibits 5-lipoxygenase in intact neutrophils without inhibiting neutrophil phospholipase A2.

CC 7-3 (Enzymes)

Section cross-reference(s): 13

IT 30652-18-7, CP 25

RL: **BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)**

(chelating agent; mechanism inhibition of arachidonate lipoxygenase by novel hydroxypyridinone iron chelators in vitro and in neutrophils)

IT 70-51-9, Desferrioxamine 148-24-3, Oxine, biological studies

533-75-5, Tropolone 4940-11-8, Ethylmaltol 7439-89-6, Iron, biological studies 9001-84-7, Phospholipase A2 30652-11-0, CP20 30652-21-2, CP40 49744-73-2, CP 84 63551-74-6, Arachidonate lipoxygenase 79672-88-1, Piroprost 80619-02-9, 5-Lipoxygenase 82249-77-2, 15-Lipoxygenase 82756-29-4, CP 26 90037-19-7, CP02 126055-13-8, CP102 138597-35-0, CP 166 175669-09-7, Ome 25

RL: **BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)**

(mechanism inhibition of arachidonate lipoxygenase by novel hydroxypyridinone iron chelators in vitro and in neutrophils)

L58 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:568995 HCAPLUS

DOCUMENT NUMBER: 123:137169

TITLE: Tetrahydropterin Reactions of Dioxo-Molybdenum(6+) Complexes: Does Redox Occur?

AUTHOR(S): Burgmayer, Sharon J. Nieter, Arkin, Michelle R.; Bostick, Laura; Dempster, Sara; Everett, Kristin M.; Layton, Heather L.; Paul, Kateri E.; Rogge, Cory; Rheingold, Arnold L.

CORPORATE SOURCE: Department of Chemistry, Bryn Mawr College, Bryn Mawr, PA, 19010, USA

SOURCE: Journal of the American Chemical Society (1995), 117(21), 5812-23

CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB This report describes our continued investigation of reactions between tetrahydropterins and dioxo-molybdenum complexes. We report the results of structural, reactivity, and theor. expts. that indicate these reduced molybdenum-pterin complexes are better described as Mo(6+)-H<sub>4</sub>pterin rather than Mo(4+)-H<sub>2</sub>pterin as previously assigned. Both Mulliken charges calcd. using the extended Huckel MO method and the bond valence sum method predict a formal molybdenum oxidn. state midway between 5+ and 6+. The complexes Mo<sub>2</sub>O<sub>4</sub>Cl<sub>2</sub>(tetrahydro-6,7-dimethylpterin)<sub>2</sub>, MoOCl<sub>3</sub>(tetrahydro-6,7-dimethylpterin), and MoOCl<sub>2</sub>(tetrahydro-6-(hydroxymethyl)pterin) (diethylidit hiocarbamate) have been characterized by <sup>1</sup>H NMR, IR, UV/vis., and cond. measurements. The x-ray crystal structure is reported for Mo<sub>2</sub>O<sub>4</sub>Cl<sub>2</sub>(tetrahydro-6,7-dimethylpterin)<sub>2</sub>.cntdot.4DMF. Inner coordination sphere bond distances indicate substantial electron d. is donated from the pterin N(5) to Mo. These complexes undergo solvation and ligand substitution reactions. It is shown that solvation is assocd. with acid-base reactions at the tetrahydropterin ligands. The molybdenum-tetrahydropterin complexes show a variety of reactivities toward the oxidants O<sub>2</sub>, 2,6-dichloroindophenol, and DMSO. This study shows that tetrahydropterin has a high affinity to chelate Mo(6+) if one of the two oxo ligands is removed and that coordination to molybdenum stabilizes tetrahydropterins toward oxidn. Results from this study also suggest that dioxo-Mo(VI) coordination to tetrahydropterin is unlikely.

CC 7-4 (Enzymes)

Section cross-reference(s): 67, 75, 78

IT Enzymes

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

(molybdenum-contg., synthesis and redox reactions of tetrahydropterin dioxo-molybdenum(6+) complexes as models for molybdoenzyme MoCo)

IT 16065-87-5, Molybdenum(6+), biological studies 73508-07-3, MoCo  
89700-34-5, Molybdopterin

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

(synthesis and redox reactions of tetrahydropterin dioxo-molybdenum(6+) complexes as models for molybdoenzyme MoCo)

IT 1008-35-1DP, complexes with dioxo-molybdenum derivs. 7439-98-7DP  
, Molybdenum, dioxo, complexes with tetrahydropterin 166331-14-2P  
166331-15-3P 166331-16-4P 166331-17-5P

166331-18-6P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis and redox reactions of tetrahydropterin dioxo-molybdenum(6+) complexes as models for molybdoenzyme MoCo)

IT 67-68-5, reactions 148-24-3, 8-Hydroxyquinoline,  
reactions 611-55-2 956-48-9, Dcip 1008-35-1 1538-75-6 7698-05-7,  
Hydrochloric acid-d 7782-44-7, Oxygen, reactions 13637-68-8  
17524-05-9 19680-83-2 75780-89-1 91379-84-9

166331-19-7 166331-21-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(synthesis and redox reactions of tetrahydropterin dioxo-molybdenum(6+) complexes as models for molybdoenzyme MoCo)

L58 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:455828 HCAPLUS

DOCUMENT NUMBER: 119:55828

TITLE: Status of certain additional over-the-counter drug

CORPORATE SOURCE: category II and III active ingredients  
United States Food and Drug Administration, Rockville,  
MD, 20857, USA  
SOURCE: Federal Register (1993), 58(88), 27636-44, 10 May 1993  
CODEN: FEREAC; ISSN: 0097-6326  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Certain over-the-counter drugs are not generally recognized as safe and effective or are misbranded under the Federal Food, Drug, and Cosmetic Act. The list includes digestive, external analgesic, insect bite and sting, poison ivy, skin protectant, diaper rash, topical antifungal, and oral analgesic products.

CC 63-2 (Pharmaceuticals)

IT Charcoal

Cocoa butter

Kaolin, biological studies

Lanolin

Pharmaceutical natural products

Protein hydrolyzates

Tannins

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(over-the-counter prepns. contg., stds. for)

IT Quaternary ammonium compounds, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(alkylbenzyldimethyl, chlorides, over-the-counter prepns. contg., stds.  
for)

IT Essential oils

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(cinnamon, over-the-counter prepns. contg., stds. for)

IT Essential oils

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(clove, over-the-counter prepns. contg., stds. for)

IT Tar

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(coal, over-the-counter prepns. contg., stds. for)

IT Essential oils

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(eucalyptus, over-the-counter prepns. contg., stds. for)

IT Turpentine

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(oil, over-the-counter prepns. contg., stds. for)

IT Essential oils

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(peppermint, over-the-counter prepns. contg., stds. for)

IT Essential oils

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(sage, Salvia officinalis, over-the-counter prepns. contg., stds. for)

IT Phenols, compounds

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(sodium salts, over-the-counter prepns. contg., stds. for)

IT 50-21-5, biological studies 50-29-3, Chlorophenothane, analysis  
50-78-2, Aspirin 52-28-8, Codeine phosphate 52-89-1, Cysteine  
hydrochloride 54-21-7, Sodium salicylate 56-40-6, Glycine, biological  
studies 56-81-5, 1,2,3-Propanetriol, biological studies 56-92-8,  
Histamine dihydrochloride 57-06-7, Allyl isothiocyanate 57-13-6, Urea,  
biological studies 57-15-8, Chlorobutanol 57-24-9, Strychnine  
57-50-1, Sucrose, biological studies 57-55-6, 1,2-Propanediol,  
biological studies 58-55-9, Theophylline, biological studies 58-56-0  
59-33-6, Pyrilamine maleate 59-51-8, Racemethionine 60-29-7, Ether,

biological studies 60-80-0, Antipyrine 61-73-4, Methylene blue  
62-44-2, Phenacetin 62-54-4, Calcium acetate 63-42-3 64-17-5,  
Alcohol, biological studies 64-18-6, Formic acid, biological studies  
65-45-2, Salicylamide 65-85-0, Benzoic acid, biological studies  
67-03-8, Thiamine hydrochloride 67-63-0, 2-Propanol, biological studies  
67-64-1, Acetone, biological studies 67-66-3, Chloroform, biological  
studies 69-65-8, D-Mannitol 69-72-7, Salicylic acid, biological  
studies 76-22-2 76-57-3, Codeine 79-09-4, Propionic acid, biological  
studies 80-49-9, Homatropine methylbromide 81-13-0, Dexpanthenol  
83-88-5, Riboflavin, biological studies 86-75-9, Benzoxiquine 87-28-5,  
Glycol salicylate 89-68-9, Chlorothymol 89-83-8, Thymol 93-60-7,  
Methyl nicotinate 94-09-7, Benzocaine 94-13-3 97-18-7, Bithionol  
97-23-4, Dichlorophen 97-53-0 98-92-0, Niacinamide 99-26-3, Bismuth  
subgallate 99-76-3, Methylparaben 100-51-6, Benzenemethanol,  
biological studies 100-97-0, biological studies 102-71-6, Trolamine,  
biological studies 102-76-1, Triacetin 108-46-3, Resorcinol,  
biological studies 108-95-2, Phenol, biological studies 109-95-5,  
Ethyl nitrite 113-92-8, Chloroprophenpyridamine maleate 115-31-1  
118-55-8, Phenyl salicylate 119-36-8, Methyl salicylate 120-51-4,  
Benzyl benzoate 121-54-0, Benzethonium chloride 122-18-9, Cetalkonium  
chloride 124-87-8, Picrotoxin 126-96-5, Sodium diacetate 127-08-2,  
Potassium acetate 127-82-2, Zinc phenolsulfonate 129-16-8,  
Merbromin 129-81-7, Iodoantipyrine 130-95-0, Quinine 132-20-7,  
Pheniramine maleate 134-31-6, Oxyquinoline sulfate 135-23-9,  
Methapyrilene hydrochloride 136-46-9 136-77-6, Hexylresorcinol  
137-08-6, Calcium pantothenate 137-40-6, Sodium propionate 137-58-6,  
Lidocaine 147-24-0, Diphenhydramine hydrochloride 148-24-3,  
Oxyquinoline, biological studies 154-69-8, Tripelennamine hydrochloride  
298-14-6, Potassium bicarbonate 299-28-5, Calcium gluconate 302-17-0,  
Chloral hydrate 404-86-4, Capsaicin 464-49-3 532-32-1, Sodium  
benzoate 537-12-2, Diperodon hydrochloride 552-37-4 552-94-3,  
Salsalate 557-05-1, Zinc stearate 557-09-5, Zinc  
caprylate 557-28-8, Zinc propionate 557-34-6, Zinc  
acetate 569-59-5, Phenindamine tartrate 577-11-7, Docusate sodium  
584-08-7, Potassium carbonate 590-46-5, Betaine hydrochloride 620-61-1  
632-99-5, Basic fuchsin 814-80-2, Calcium lactate 824-35-1, Calcium  
salicylate 1176-08-5 1304-85-4, Bismuth subnitrate 1314-13-2  
, Zinc oxide, biological studies 1314-23-4, Zirconium oxide, biological  
studies 1317-25-5, Alcloxa 1319-77-3, Cresol 1321-11-5, Aminobenzoic  
acid 1330-43-4, Boron sodium oxide (B4Na207) 1332-37-2, Iron oxide,  
biological studies 1403-17-4, Candicidin 1420-53-7, Codeine sulfate  
1490-04-6, Menthol 1984-06-1, Sodium caprylate 2219-72-9,  
p-tert-Butyl-m-cresol 3486-35-9, Zinc carbonate 4438-95-3  
5892-10-4, Bismuth subcarbonate 6202-05-7, Cyclomethycaine sulfate  
7440-02-0, Nickel, analysis 7440-44-0, Carbon, biological studies  
7487-88-9, Magnesium sulfate, biological studies 7487-94-7, Mercuric  
chloride, biological studies 7553-56-2, Iodine, biological studies  
7631-99-4, Sodium nitrate, biological studies 7646-85-7, Zinc  
chloride, biological studies 7647-01-0, Hydrochloric acid, biological  
studies 7647-14-5, Sodium chloride, biological studies 7664-38-2,  
Phosphoric acid, biological studies 7664-41-7, Ammonia, biological  
studies 7704-34-9, Sulfur, biological studies 7705-08-0, Ferric  
chloride, biological studies 7720-78-7, Ferrous sulfate 7722-84-1,  
Hydrogen peroxide, biological studies 7733-02-0, Zinc sulfate  
7757-79-1, Potassium nitrate, biological studies 7758-98-7, Cupric  
sulfate, biological studies 7761-88-8, Silver nitrate, biological  
studies 7784-25-0, Alum, ammonium 8011-96-9, Calamine 8048-31-5,  
Theobromine sodium salicylate 8050-81-5, Simethicone 8063-33-0  
9000-69-5, Pectin 9000-92-4, Diastase 9001-62-1, Lipase 9001-75-6,

Pepsin 9001-92-7, Prolase 9004-81-3, Polyoxyethylene laurate  
 9005-25-8, Starch, biological studies 10043-01-3, Aluminum sulfate  
 10043-35-3, Boric acid, biological studies 10043-67-1, Alum, potassium  
 10098-89-2, Lysine hydrochloride 10377-95-4 10402-16-1, Copper oleate  
 12173-47-6, Hectorite 13943-58-3, Potassium ferrocyanide 14807-96-6,  
 Talcum, biological studies 15347-57-6, Lead acetate 21645-51-2,  
 Aluminum hydroxide, biological studies 25086-89-9 25322-68-3D, alkyl  
 ethers 27877-51-6, Tolindate 29825-08-9 31586-77-3, Bismuth sodium  
 tartrate 33032-12-1, Methapyrilene fumarate 37189-34-7 37933-78-1  
 148619-56-1, Zyloxin

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (over-the-counter preps. contg., stds. for)

L58 ANSWER 10 OF 11 HCPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1988:606529 HCPLUS

DOCUMENT NUMBER: 109:206529

TITLE: Exploring relationships between mutagenic and carcinogenic potencies

AUTHOR(S): Piegorsch, Walter W.; Hoel, David G.

CORPORATE SOURCE: Div. Biometry Risk Assess., Natl. Inst. Environ.  
 Health Sci., Research Triangle Park, NC, 27709, USA

SOURCE: Mutation Research (1988), 196(2), 161-75

CODEN: MUREAV; ISSN: 0027-5107

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Salmonella mutagenic and rodent carcinogenic potencies are calcd. for 112 compds. recently studied by the U.S. National Toxicol. Program. Twenty-eight of 112 compds. are seen to exhibit simultaneous nonzero mutagenic and carcinogenic potencies. These are combined with an earlier list of mutagenic and carcinogenic compds. to study possible trends in the data. A significant pos. correlation is exhibited between mutagenic and carcinogenic potencies in the combined data, although the obsd. scatter is too great for the overall result to be predictive. Classification by chem. class further indicates pos. correlations near one for chems. classified as nitroarom. and related compds. Patterns in mutagenic and carcinogenic potency over time are also examd. Mean potencies of recently studied compds. are seen to trend lower than those of compds. studied .gtoreq.10 yr ago.

CC 4-6 (Toxicology)

IT Amines, biological studies

Azo compounds

Epoxides

Nitro compounds

Trace elements, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU

(Biological study, unclassified); BIOL (Biological study)

(biol. activity of, carcinogenic and mutagenic potencies in relation to)

IT Hydrocarbons, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU

(Biological study, unclassified); BIOL (Biological study)

(chloro, biol. activity of, carcinogenic and mutagenic potencies in relation to)

IT Amines, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU

(Biological study, unclassified); BIOL (Biological study)

(nitroso, biol. activity of, carcinogenic and mutagenic potencies in relation to)

IT Aromatic hydrocarbons, biological studies

**RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)**  
**(polycyclic, biol. activity of, carcinogenic and mutagenic potencies in relation to)**

IT 50-55-5, Reserpine 50-81-7, biological studies 57-06-7, Allyl isothiocyanate 57-13-6D, Urea, derivs. 59-42-7 59-87-0, Nitrofurazone 69-53-4, Ampicillin 69-65-8, D-Mannitol 71-43-2, Benzene, biological studies 71-43-2D, Benzene, derivs. 75-27-4, Bromodichloromethane 75-35-4, Vinylidene chloride, biological studies 75-56-9, Propylene oxide, biological studies 76-01-7, Pentachloroethane 78-42-2, Tris(2-ethylhexyl)phosphate 78-59-1, Isophorone 78-87-5, 1,2-Dichloropropane 79-01-6, Trichloroethylene, biological studies 79-57-2 80-05-7, Bisphenol A, biological studies 80-62-6, Methyl methacrylate 82-68-8, Pentachloronitrobenzene 83-79-4, Rotenone 85-68-7, Butyl benzyl phthalate 87-62-7, 2,6-Xyldidine 90-41-5 90-43-7, o-Phenylphenol 92-52-4D, Biphenyl, bromo derivs. 95-50-1, 1,2-Dichlorobenzene 96-12-8, 1,2-Dibromo-3-chloropropane 97-53-0, Eugenol 99-57-0, 2-Amino-4-nitrophenol 100-40-3, 4-Vinylcyclohexene 101-77-9 101-80-4 101-90-6, Diglycidyl resorcinol ether 103-23-1, Di(2-ethylhexyl) adipate 105-60-2, Caprolactam, biological studies 105-87-3, Geranyl acetate 106-46-7, 1,4-Dichlorobenzene 106-88-7, 1,2-Epoxybutane 106-93-4, 1,2-Dibromoethane 107-07-3, 2-Chloroethanol, biological studies 108-60-1, Bis(2-chloro-1-methylethyl) ether 108-78-1, Melamine, biological studies 108-90-7, Chlorobenzene, biological studies 108-95-2, Phenol, biological studies 109-69-3, N-Butyl chloride 112-53-8D, ethoxylated 113-92-8, Chlorpheniramine maleate 115-28-6, Chlorendic acid 117-81-7, Di(2-ethylhexyl) phthalate 119-53-9, Benzoin 121-79-9, Propyl gallate 121-88-0, 2-Amino-5-nitrophenol 124-48-1, Chlorodibromomethane 124-64-1, Tetrakis(hydroxymethyl)phosphonium chloride 126-92-1, Sodium 2-ethylhexyl sulfate 127-18-4, Tetrachloroethylene, biological studies 131-17-9, Diallyl phthalate 132-98-9, Penicillin VK 135-88-6, N-Phenyl-2-naphthylamine 136-77-6, 4-Hexylresorcinol 137-30-4, Ziram 140-11-4, Benzyl acetate 140-88-5, Ethyl acrylate 148-24-3, 8-Hydroxyquinoline, biological studies 149-30-4, 2-Mercaptobenzothiazole 150-68-5, Monuron 299-42-3 518-47-8, C.I. Acid yellow 73 542-75-6, 1,3-Dichloropropene 542-78-9, Malonaldehyde 563-47-3 569-61-9 584-84-9, 2,4-Toluene diisocyanate 597-25-1, Dimethyl morpholinophosphoramidate 598-55-0, Methyl carbamate 609-20-1, 2,6-Dichloro-p-phenylenediamine 630-20-6, 1,1,1,2-Tetrachloroethane 643-22-1 756-79-6, Dimethyl methylphosphonate 823-40-5 842-07-9, C.I. Solvent yellow 14 868-85-9, Dimethyl hydrogen phosphite 1163-19-5, Decabromodiphenyl oxide 1330-20-7, Xylene, biological studies 1746-01-6, 2,3,7,8-Tetrachlorodibenzo-p-dioxin 1936-15-8, C.I. Acid orange 10 2164-17-2, Fluometuron 2385-85-5, Mirex 2432-99-7, 11-Aminoundecanoic acid 2475-45-8, C.I. Disperse blue 1 2783-94-0 2784-94-3 2832-40-8, C.I. Disperse yellow 3 2835-39-4, Allyl isovalerate 2871-01-4 3567-69-9, C.I. Acid red 14 5160-02-1 6373-74-6, C.I. Acid orange 3 7601-54-9D, Trisodium phosphate, chlorinated 7704-34-9D, Sulfur, compds. 7772-99-8, Stannous chloride, biological studies 11113-50-1, Boric acid 17924-92-4, Zearalenone 21739-91-3, Cytembena 33229-34-4 56093-45-9, Selenium sulfide

**RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)**  
**(biol. activity of, carcinogenic and mutagenic potencies in relation to)**

DOCUMENT NUMBER: 107:53670  
 TITLE: Mechanism of toxicity of ionic copper and copper complexes to algae  
 AUTHOR(S): Stauber, J. L.; Florence, T. M.  
 CORPORATE SOURCE: Lucas Heights Res. Lab., CSIRO, Sutherland, 2232, Australia  
 SOURCE: Marine Biology (Berlin, Germany) (1987), 94(4), 511-19  
 CODEN: MBIOAJ; ISSN: 0025-3162  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Cu ions depressed both cell division and photosynthesis in *Asterionella glacialis* and *Chlorella pyrenoidosa*, whereas ionic Cu concns. which were inhibitory to cell division in *Nitzschia closterium* had no effect on photosynthesis, respiration, ATP prodn., electron transport, or membrane ultrastructure. This suggests that in *N. closterium*, Cu does not act on the chloroplast, the mitochondrion, or the cell membrane. Cu-Et xanthogenate was exceptional among the Cu complexes in that it stimulated respiration, mitochondrial electron transport, and ATP formation in *N. closterium* under conditions of strongly inhibited cell division and slightly stimulated photosynthesis. Ionic Cu toxicity may result from an intracellular reaction between Cu and GSH leading to a lowering of the GSH:GSSG ratio and suppression of mitosis. In addn., Cu inhibits the enzyme catalase and reduces cell defense mechanisms against H<sub>2</sub>O<sub>2</sub> and O-free radicals. Lipid-sol. Cu complexes are more toxic than ionic Cu because both the metal and the ligand are introduced into the cell. Toxicity of ionic Cu is ameliorated by trivalent metal ions in the growth medium, including those of Mn, Co, Al, Fe, and Cr which form a layer of metal (III) hydroxide around the algal cell, adsorb Cu, and reduce its penetration into the cell. The degree of insol. of the metal (III) hydroxide is related to its ability to protect against Cu toxicity. In addn., Mn and Co catalytically scavenge damaging H<sub>2</sub>O<sub>2</sub> and superoxide radicals, resp., produced by the cell.

CC 4-3 (Toxicology)  
 IT Trace elements, biological studies  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (metals, copper toxicity to *Nitzschia closterium* response to)  
 IT 7429-90-5, Aluminum, biological studies 7439-89-6, Iron, biological studies 7439-96-5, Manganese, biological studies 7440-47-3, Chromium, biological studies 7440-48-4, Cobalt, biological studies  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (copper toxicity to *Nitzschia closterium* response to)  
 IT 7440-50-8, Copper, biological studies  
 RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
 (toxicity of, to algae and diatom, mechanism of)  
 IT 50-81-7, Ascorbic acid, biological studies 61-82-5, 3-Amino-1,2,4-triazole 66-71-7D, 1,10-Phenanthroline, copper complexes 85-85-8D, copper complexes 108-46-3, biological studies 119-91-5D, 2,2'-Biquinoline, copper complexes 120-80-9, Catechol, biological studies 123-30-8, p-Aminophenol 366-18-7D, copper complexes 484-11-7D, 2,9-Dimethyl-1-10-phenanthroline, copper complexes 591-27-5, m-Aminophenol 1147-56-4D, 1-(2-Thiazolylazo)-2-naphthol, copper complexes 3002-81-1D, 5,6-Dimethyl-1,10-phenanthroline, copper complexes 3248-05-3D, 4,7-Dimethyl-1,10-phenanthroline, copper complexes 4733-39-5D, Bathocuproine, copper complexes 7439-92-1, Lead, biological studies 7440-02-0, Nickel, biological studies 7440-43-9, Cadmium, biological studies 7440-66-6, Zinc, biological studies

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7722-84-1, biological studies 9001-51-8, Hexokinase 9001-75-6, Pepsin  
9002-07-7, Trypsin 9002-13-5, Urease

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
(toxicity of, to Chlorella pyrenoidosa)

IT 114-83-0D, copper complexes 139-13-9D, Nitrilotriacetic acid, copper  
complexes 148-24-3D, Oxine, copper complexes 151-01-9D, Ethyl  
xanthogenate, copper complexes

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
(toxicity of, to Chlorella pyrenoidosa and Nitzschia closterium)